REVIEW REPORT

Review of
National Aeronautics and Space Administration
Cooperative Agreements With
Large Commercial Firms
P&A-97-001

August 22, 1997

OFFICE OF INSPECTOR GENERAL

National Aeronautics and
Space Administration

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Reply to Attn of: W

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TO: H/Associate Administrator for Procurement
R/Associate Administrator for Aeronautics & Space Transportation Technology

FROM: W/Assistant Inspector General for Partnerships & Alliances

SUBJECT: Report on Review of NASA Cooperative Agreements With Large Commercial Firms, P&A-97-001

In 1993, NASA began using cooperative agreements with commercial firms to advance and commercialize new technologies. In fiscal year 1996, NASA had 76 active cooperative agreements with large commercial firms. On these, NASA's total cash share was about $1 billion. NASA has announced intentions to increase its use of cooperative agreements.

The Office of Inspector General (OIG) completed a review of cooperative agreements with large commercial firms that addressed NASA's application, management, and results achieved from using this type of procurement instrument. We found that NASA uses cooperative agreements to develop, advance, and transfer to industry technologies that support Agency programs. We identified issues and concerns that require management's attention and reassessment, including: NASA's incomplete evaluation and recognition of its resource sharing contributions, failure to enforce required reporting by recipients, and other administrative matters. We recommended that NASA management ensure compliance with or revise its policies to strengthen the use of cooperative agreements. On July 28, 1997, we issued a draft report to NASA management. Management's response to the recommendations was dated August 15, 1997. Generally, management concurred with the report's recommendations.

Should you have any questions or need information, please contact me at 358-2162.

[original signed by]
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Enclosure

cc:
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COOPERATIVE AGREEMENTS
With Large Commercial Firms

NASA Headquarters, Washington, DC

EXECUTIVE SUMMARY

PURPOSE

Traditionally, the National Aeronautics and Space Administration (NASA) used cooperative agreements with nonprofit institutions and universities in cases requiring a close working relationship. Over the past few years, NASA began to view cooperative agreements as a way to work closer with for-profit organizations to help those firms in advancing and commercializing new technologies.

The Office of Inspector General (OIG) initiated this review to evaluate the effectiveness of NASA's cooperative agreement partnerships with commercial firms considered large businesses.[1] The review included: (1) determining if cooperative agreements have achieved planned results or benefits established as the basis for the type of procurement instrument used; (2) evaluating the effectiveness of NASA's use of cooperative agreements to support research and development and technology transfer activities; and (3) evaluating compliance with applicable guidelines and regulations.

The objectives of this review were to address NASA's application, implementation, management, and results achieved from using cooperative agreements with large commercial firms. The review excludes data rights and intellectual property except new technology reporting; sale or transfer of technology to foreign entities; and liability and risks of loss.[2] We did not evaluate agreements for

[1] For data keeping purposes, NASA classifies firms as large or small businesses. Although a large business is not specifically defined, it is considered as such if it does not meet the definition of a small business as found at 15 U.S.C. 632, "Small Business Act." We used the terms "large business" and "large commercial firm" interchangeably.

[2] OIG Audit Report IG-97-019, "Reusable Launch Vehicle Program," dated March 27, 1997, discussed NASA's continuing efforts to obtain Congressional approval of a waiver of indemnification for its private sector reusable launch vehicle program partners.

technical merit or evaluate the results of the research they generate. A separate OIG audit is underway to assess NASA's use of a cooperative agreement on the X-33 Program.[3]

BACKGROUND

By law, an executive agency shall use a cooperative agreement as the legal instrument to reflect a relationship between the U.S. Government and a state, local government, or other recipient whenever:

> *(1) the principal purpose of the relationship is to transfer a thing of value to the State, local government, or other recipient to carry out a public purpose of support or stimulation authorized by a law of the United States instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the United States Government; and*
>
> *(2) substantial involvement is expected when the executive agency and the State, local government, or other recipient is carrying out the activity contemplated by the agreement.*[4]

Cooperative agreements are:

- Usually awarded by means of a competitive announcement;
- Financial assistance instruments used to stimulate or support activities for authorized purposes and in which the Government participates substantially in the performance of the efforts;

[3] Letter from the Acting Assistant Inspector General for Auditing to the Deputy Associate Administrator for Aeronautics & Space Transportation Technology, dated April 15, 1997, announcing an audit of the X-33 cooperative agreement NCC8-115, under assignment number A-HA-97-048.

[4] 31 U.S.C. 6305. United States Code (U.S.C.), Title 31 - "Money and Finance," Subtitle V - "General Assistance Administration," Chapter 63 - "Using Procurement Contracts and Grants and Cooperative Agreements," Section 6305, "Using Cooperative Agreements."

- Agreements, and not procurement contracts, as they do not acquire goods and services for the direct benefit of the United States (U.S.) Government;

- Used to carry out a public purpose or emphasis authorized by law;

- Instruments that require the recipient to use funds or property provided by the Federal agency for a specific purpose and method; and

- Not subject to the procurement statutes or the Federal Acquisition Regulation (FAR).

According to NASA's current policy, cooperative agreements are ordinarily negotiated with commercial firms to:

- Support research and development;

- Provide technology transfer from the Government to the recipient; or

- Develop a capability among U.S. firms to potentially enhance U.S. competitiveness.[5]

For further discussion on NASA's authority and use of cooperative agreements, see Appendix I, "Background."

RESULTS IN BRIEF

Cooperative agreements appear to have achieved NASA's goals in that they:

- Support expanded use of NASA's organizational programmatic research and development activities, advanced new technologies to recipients and produced effective results in collaborating with industry;

[5] §1274.101, "Purpose." NASA's policy for cooperative agreements with commercial firms is found at 14 C.F.R. Part 1274. Current Agency implementation is found in NASA Procedures and Guidelines (NPG) 5800.1D, dated July 23, 1996. Section numbers of the C.F.R. are preserved in the NPG. Therefore, references such as §1274.101 correspond to both publications.

- Provide NASA an effective mechanism to partner with large commercial firms to leverage their financial investments;

- Allow NASA to share risk and specialized technical capabilities with industry;

- Allow collaborative research to be conducted under more flexible terms and conditions than the standard provisions found in contracts; and

- Provide a means for NASA to deliver its products and services to customers and thereby execute its Strategic Plan.

Based upon the results of a questionnaire sent to recipients, industry partners favor use of cooperative agreements. Industry is typically willing to continue partnering with NASA using these agreements (see "Industry Participation," and Appendix VI).

OVERALL RECOMMENDATIONS

The results of this review suggest positive technical accomplishments and reduced administrative burdens associated with the use of cooperative agreements. However, we identified the following issues and concerns that NASA management should address to improve the usefulness and effectiveness of cooperative agreements:

- Resource Sharing Contributions:
  - — Government noncash contributions are not valued;
  - — Recipient contributions are not verified; and
  - — Independent cost estimates of NASA contributions are not prepared.

- Reporting Requirements:
  - — Recipients are not submitting required reports;
  - — Provisions are omitted from cooperative agreements without approval; and
  - — CO's are not properly distributing required copies of agreements.

- Other Administrative Matters:
  - — Provisions of the Aerospace Industry Technology Program (AITP) are not being considered for all agreements;

— Data in the Agencywide procurement data system is not correct;
— Agreements awarded should have been contracts;
— Data in Agencywide technology tracking system is not correct;
— Policy is lacking for cooperative agreement use for instances involving long duration, high estimated costs, or major NASA systems;[6] and
— Contracting officer's technical representative (COTR) delegations are not required.

Addressing these issues and concerns should result in improved management and more effective use of cooperative agreements.

[6] NASA Handbook (NHB) 7120.5, "Management of Major System Programs and Projects," Appendix A, "Definitions," defines a major system as a program/project for system(s) development and operation that is directed at and critical to fulfilling an Agency mission; entails the allocation of relatively large resources; or warrants special management attention.

INTRODUCTION

AGENCYWIDE REVIEW

In Fiscal Year (FY) 1996, NASA had 1,027 active cooperative agreements, of which 76, or 7.4 percent, were with large commercial firms. Figure 1 shows the distribution of these agreements by Center: Marshall Space Flight Center (MSFC) (28), Goddard Space Flight Center (GSFC) (20), Lewis Research Center (LeRC) (9), Langley Research Center (LaRC) (7) and Ames Research Center (ARC) (6). "Other" includes NASA Headquarters (3), Jet Propulsion Laboratory (1), Kennedy Space Center (1), and Stennis Space Center (1).

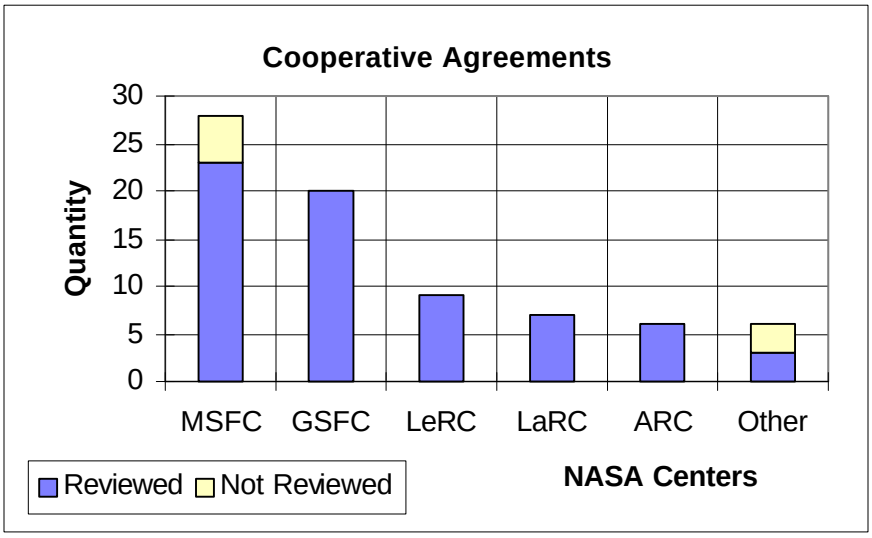


Figure 1 - Cooperative Agreement Distribution

Appendix III, Charts 1 and 2, show additional information, such as award and completion dates, estimated values, and FY 1996 obligations, for those cooperative agreements with large commercial firms that were active in FY 1996.

Of the preceding 76 cooperative agreements, the team reviewed the official procurement file for 68, or 89 percent. Appendix III, Chart 3, shows selected information on the cooperative agreements reviewed.

OBSERVATIONS AND RECOMMENDATIONS

RESOURCE SHARING CONTRIBUTIONS

Cooperative agreements with large commercial firms represent a collaborative and developmental effort to conduct joint-sponsored research with individual companies and consortia. NASA may provide resources that include funds, services, equipment, information, intellectual property, personnel, or facilities. These may be on a shared or pooled basis for developing and commercializing technology having application to both NASA and industry. NASA policy requires a substantial cash or noncash contribution by the industry partner. Unless a deviation is approved, a recipient must contribute at least half of the total resources required for a cooperative agreement.

During this review, we identified several significant issues relating to resource sharing by both the recipient and the Agency. Specifically, NASA has generally not: (1) accurately valued its noncash contributions; (2) verified the recipient's proposed and actual noncash contributions; and (3) prepared independent cost estimates for its contributions.

Policy

NASA defines resource contribution as the total value of resources provided by either party to the cooperative agreement including both cash and noncash contributions. While no statutory requirement exists for cost sharing on cooperative agreements, NASA expects the recipient to contribute at least 50 percent of the total resources required to accomplish the agreement. Pertinent resource sharing policy provisions include:

- The recipient's contribution may be either cash, noncash, or both. The Associate Administrator for Procurement must approve a deviation before award of any cooperative agreement where the recipient's contribution is less than 50 percent.

- Cost sharing requirements on cooperative agreements with commercial firms are based on Office of Management and Budget (OMB) Circular A-110.[7] Only cash or certain noncash resources may be used for the recipient's contribution to a cooperative

[7] OMB Circular A-110, "Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations," Subpart C, Section 23, dated November 23, 1993 (see Appendix IV).

agreement. Acceptable noncash resources include items such as purchased equipment, labor, and office space.

- The recipient's resource share of the cooperative agreement may be allocated as part of its independent research and development (IR&D) program. This means that costs contributed by a recipient may be recoverable as indirect costs, providing the costs would be allowable as IR&D if there was no cooperative arrangement. Allowing the use of IR&D funds achieves uniformity and consistency with other Federal agencies in the treatment of similar costs.

- The cooperative agreement notice (CAN) must describe the noncash components (personnel, equipment, facilities, etc.) of the Government's contribution to the cooperative agreement besides funding. The offeror may propose to use additional noncash Government resources under two conditions. First, the offeror is responsible for verifying the availability of the resources and their suitability for their intended purpose, and second, those resources are part of the Government contribution (which must be matched by the Recipient) and paid for directly by the awarding organization.

Summary of Contributions

During this review, we analyzed the official procurement file for 68 agreements as noted in Appendix III, Chart 3. For each agreement we computed the total resource sharing amount (cash + IR&D funds + noncash contribution) of the recipient and NASA. Attention is directed to NCC8-115, NASA's X-33 project, which has a total program value of $1.124 billion ($912 million (80 percent) NASA/Government funding and $212 million (20 percent) recipient funding). This agreement far exceeds the value of other agreements and significantly affects the comparative use of the agreement's data.

OBSERVATIONS AND RECOMMENDATIONS

Analysis of the data at Appendix III, Chart 3, shows the following:

CA's Reviewed (68)	NASA/Government	Recipient
With NCC8-115	65%	35%
Without NCC8-115	41%	59%

Figure 2 - Percent of Resource Sharing Contributions

For the agreements reviewed, 13 recipients did not meet the 50 percent resource sharing requirement. Of these, eight were issued prior to February 1994, when NASA began requiring recipients to contribute at least 50 percent of a cooperative agreement's total cost. On the remaining five, NASA approved a recipient contribution of less than 50 percent.

As Figure 3 shows, the recipients' contributions included cash, IR&D and noncash components. The share reported by NASA/Government represents almost all cash (appropriated funds). However, our review determined that NASA/Government provided noncash efforts, but because this contribution was not valued it was not included in the resource sharing totals. NASA's contributions are understated, sometimes significantly, for the reasons below. Until NASA management addresses these issues it cannot accurately determine the resource sharing ratio. NASA needs to:

- Accurately determine the value of its noncash contributions;
- Verify the recipient's proposed contribution; and
- Normally develop independent cost estimates for its cash and non-cash contributions.

CA's Reviewed (68)	NASA/Government	Recipient
Cash	$1,101 million	$251 million
IR&D	n/a	$211 million
Noncash	$119 million	$193 million[8]
Total	$1,220 million	$655 million

Figure 3 - Summary of Resource Sharing Contributions

NASA Does Not Accurately Determine and Value the Government's Noncash Contribution

According to NASA's policy, the CAN must describe noncash contributions (personnel, equipment, facilities, etc.) of both NASA and other contributing Government agencies that a recipient must match. Further, both NASA and the recipient must value resource contributions in order to determine if the minimum sharing arrangement ratio has been met.

Nearly all agreements require some degree of NASA/Government noncash contribution. This ranges from agreement administration to substantial technical participation and the use of NASA/Government facilities, equipment or other assets. Examples of noncash contributions include: supercomputer time; Shuttle test time; design and fabrication of test equipment; design and analysis activities; and use of laboratories, warehouse storage, or office space.

Our review determined that NASA's failure to value its noncash contributions is due to:

- Inconsistencies in NASA's approach in recognizing and valuing its contributions;
- The inability of its cost accounting system to provide fully burdened, accurate, and reliable cost data;
- Reluctance to apply the procedures used to develop estimates for reimbursable activities; and

[8] Of the recipient's contribution of $193 million, $119 million is attributable to agreement NCC8-115.

- Resource sharing policy conflicts with other NASA policies and practices:
  - — Not charging for use of research facilities when the user is willing to share results;
  - — NASA Handbook (NHB) 7120.5, "Management of Major System Programs and Projects," prescribes that cost estimating is to exclude civil servant costs from life cycle cost estimates;
  - — NASA Financial Management Manual (FMM), Section 9090, "Reimbursable Agreements," states that reimbursable agreement calculations should include civil service labor costs; and
  - — Guidance issued for X-33, Phase II, directed that the resultant cooperative agreement would not require accounting for salaries or travel for Government personnel.[9]

NASA's failure to value its noncash contributions has the effect of:

- Distorting the required 50/50 resource sharing ratio;
- Causing NASA to potentially contribute more than its agreed to resource share;
- Not ensuring that the recipient meets the required sharing ratio;
- Requiring NASA to contribute more appropriated funds than necessary to achieve its equal share; and
- Bypassing the requirement to obtain Headquarters approval as full costing of NASA's contribution could result in the recipient contributing less than 50 percent of total cost.

[9] OIG Rapid Action Report, IG-97-019, "Reusable Launch Vehicle; Survey of X-33 Task Agreements," dated March 28, 1997. Management was advised that the $107.2 million of noncash funding did not include about $50 million of civil service salaries.

OBSERVATIONS AND RECOMMENDATIONS

NASA Does Not Verify the Recipient's Proposed and Actual Contributions

Contrary to NASA policy, our review found little evidence that NASA personnel verify the recipient's proposed contribution. The contracting officer (CO) and technical team must decide whether the overall proposed cost of the project is reasonable and that the recipient's contribution is valid, verifiable, and available. In addition, cost sharing requirements in OMB Circular A-110 (see Appendix IV) include seven criteria for accepting the recipient's contribution (for example, being verifiable from the recipient's records).

We found that NASA:

- Seldom evaluates the recipient's proposal against the OMB criteria;
- Typically accepts the recipient's proposed contributions without a detailed analysis; and
- Inconsistently verifies the recipient's actual contributions.

Because of the absence of verification, NASA is unable to establish a realistic and accurate cost sharing ratio with the recipient. Also, failure to subject the criteria of OMB Circular A-110 to the recipient's contribution further affects NASA's ability to ensure maintenance of a realistic and equal sharing ratio.

IR&D Impact

In September 1994, NASA published a class deviation to eliminate provisions against treating as allowable indirect costs, recipient IR&D contributions under NASA cooperative agreements.[10]

When recipient IR&D funds are committed and ultimately recovered as allowable indirect costs, the result is much less of an equal cost sharing arrangement and reduces the recipient's cost risk. For the agreements in this review that contained recipient-committed IR&D funds, the impact is as follows:

- $211.6 million of IR&D represents approximately 25 percent of the recipients' total resource contributions;

[10] "Federal Register," September 1994, deviation to FAR 31.205-18(3). The final FAR rule making that revision was published March 17, 1997.

- On agreement NCC8-115 for the X-33, $121.7 million of IR&D funds represents approximately 58 percent of the recipient's total contributions; and

- Contributions by 14 recipients consisted solely of IR&D funds.

NASA Does Not Perform Independent Cost Estimates

Most cooperative agreements reviewed included the use of NASA/Government facilities and personnel in performing the research activity. Our review found that NASA does not normally identify its noncash contributions, including the extent of personnel involved. NASA has no policy for requiring that an independent cost estimate be made of either the personnel or total noncash contributions. An exception to this is NCC8-115, which is accounting for the facilities and personnel contribution by task agreement.

On March 13, 1997, the Acting Deputy Administrator issued a memorandum to Officials-in-Charge and Directors, NASA Field Installations, on cost/benefit analyses. The communication identifies a key element—that decision making must stem from independent, up-front, cost/benefit analyses. These analyses should represent a thorough review of the requirement of identifying the costs and benefits of major decisions. NASA expects all offices to do these analyses quickly. The analyses should be of sufficient rigor to provide management with the information it needs to make the best decisions and withstand the scrutiny of others.

An independent cost estimate would allow NASA to identify and value its total resource sharing contributions (cash and noncash), and achieve compliance with the required equal sharing policy. Current policy contains direction and responsibilities for evaluating the recipient’s proposal but is silent on who is responsible for preparing an estimate of the value of NASA resources and using it to track actual resources expended.

Resource Sharing Summary

As described above, this review determined that NASA does not adhere to its resource sharing policy. Specifically, NASA: (1) is not valuing its noncash contributions, and (2) does not verify the recipient's contribution. Also, NASA needs to develop independent estimates to determine and validate NASA's cash and noncash contributions.

Therefore, for compliance with current cooperative agreement resource sharing policies, particularly when considering the planned increased use of cooperative agreements, NASA acquisition and technical staff need to improve their coordination to ensure thorough implementation and application of policies.

Recommendation 1

To ensure resource sharing contributions are validated and valued, we recommend that the Associate Administrator for Procurement reassess NASA resource sharing policies, to include as a minimum, the following:

- Redefine the definition of resource sharing which supports the Office of the Chief Financial Officer's (Code B) full cost initiatives;
- Provide guidance on identifying and valuing its total resource sharing contributions—noncash and cash; and
- Provide guidance on verifying the recipient's proposed and actual contributions.

Management's Response

CONCUR. Code H will reassess the cooperative agreement resource sharing policies, with Code B and other support as deemed appropriate, and issue guidance and/or a formal change to the Grant and Cooperative Agreement Handbook.

OIG's Evaluation of Management's Response

Management's proposed action is responsive to our recommendation. The OIG requests a copy of any new guidance or change issued.

OBSERVATIONS AND RECOMMENDATIONS

REPORTING REQUIREMENTS

During our review, we identified many instances where CO's were either not complying with reporting requirements or not ensuring recipient compliance. Examples included CO's omitting required provisions from agreements without first obtaining approval to do so and recipients not submitting the required annual summary research report. Despite the prevalence of noncompliance, we did not find any instance in which NASA took steps to ensure a CO or recipient observed these requirements. Nor did we find any correlation between following reporting requirements and successfully completing a project. Depending upon an agreement's specific circumstances, some reporting requirements may be unnecessary for CO's and recipients.

We identified noncompliance by CO's in three areas: (1) ensuring that recipients comply with reporting requirements contained in agreements; (2) obtaining approval to omit required reporting provisions from agreements; and (3) distributing copies of the basic cooperative agreement to all required parties.

Not complying with reporting requirements hinders NASA's ability to achieve not only its mandated mission but several established internal missions. For example:

- If recipients fail to submit the required new technology reports, NASA cannot share leading-edge technology with industry;

- Without the required performance reports, NASA cannot communicate the results of its research and development activities; and

- Unless NASA receives required equipment reports it cannot accurately account for its assets or prepare reliable financial statements.

OBSERVATIONS AND RECOMMENDATIONS

Required Reporting by Recipients

The NASA Procedures and Guidelines (NPG) 5800.1D, "Grant and Cooperative Agreement Handbook" (hereafter called the Handbook), lists reporting provisions that are to be incorporated and made part of all cooperative agreements.[11] The Associate Administrator for Procurement must approve any deviation from these provisions. We focused our review on the following three reporting provisions that each cooperative agreement is to include:

- §1274.912, "Patent Rights - Retention by the Recipient (Large Business)." Recipients must report inventions, discoveries, improvements, or innovations developed under cooperative agreements. Recipients must submit interim reports every 12 months and certify that all reportable items were disclosed or that there are no such items. Recipients must also submit final reports within 3 months after completing the negotiated work. These reports are to be sent to the CO and the New Technology Representative. This patent rights provision is frequently referred to as the new technology reporting requirement.

- §1274.921, "Publications and Reports: Non-Propriety Research Results." Recipients must submit annual performance reports, which describe research accomplished during the report period, at least 60 days before the anniversary date of the cooperative agreement. A summary of all research accomplished during an agreement is due within 90 days after an agreement's expiration date. A copy of each report is due to the CO, COTR, and the NASA Center for Aerospace Information (CASI).

- §1274.923, "Equipment and Other Property." Recipients must submit annually, by October 31, an inventory report that lists all Government-furnished equipment and equipment obtained with Government funds. Reports are sent to the CO.

[11] See Appendix IV, "Policies," for the portion of the Handbook that relates to cooperative agreements with large commercial firms. For review purposes, we consider the reporting provisions constant since 1994.

OBSERVATIONS AND RECOMMENDATIONS

New Technology Reporting

Most of the agreement files reviewed showed that recipients were not submitting interim reports of reportable items as required by §1274.912. In several instances, CO's and COTR's were unaware of new technology reporting provisions and, therefore, failed to monitor or remind recipients of the requirement.

To determine the extent to which agreement recipients were reporting new technologies, we focused on a review of data generated from the Technology Tracking System (TechTracS). TechTracS is an Agencywide system used to support commercial technology activities and to disclose the resulting new technologies. As of February 1997, TechTracS contained only ten new technology reports for the applicable agreements. NASA and its recipients have invested total contributions of about $1.875 billion into these agreements. This corresponding low level of reporting reinforces various problems identified by the OIG in an earlier review.[12]

When considering that only ten new technology reports for the applicable cooperative agreements are in TechTracS, other concerns surface about the Agency's new technology reporting system. Such low reporting suggests:

- Recipients are not developing and/or reporting new technologies to NASA;
- New technology reports are being submitted but not being entered into TechTracS;
- CO's and COTR's are not aware of or enforcing reporting requirements on cooperative agreements; and/or
- Data entry problems exist.

[12] OIG Review Report, P&A-96-001, "Review of National Aeronautics and Space Administration New Technology Reporting," dated September 30, 1996.

Center for Aerospace Information (CASI)

CASI is a contractor-run facility that acquires, maintains, distributes, and preserves NASA's Scientific and Technical Information (STI) Program. The STI program supports the Agency's missions, as defined in the "NASA Strategic Plan," to communicate scientific knowledge and understanding and to help transfer NASA's research and development activities to the aerospace and academic communities.

Only a few agreement files reviewed contained copies of annual performance reports. In many cases, we could not determine if the recipient also sent a copy to CASI as required. Because of this, our testing for §1274.921 focused on finding if CASI records show receipt of required reports from the recipients in our sample. For each agreement, CASI provided a list of documents received as of March 31, 1997. They identified the number of reports in their data base (such as annual performance reports and other documents related to an agreement), and if they received a final report.

We calculated the number of annual performance reports that was due to CASI, combined it with the data CASI provided, and prepared Figure 4. As shown, only 7 recipients, or 24 percent, have sent annual summary of research reports to CASI. Of the 57 reports that CASI should have received as of March 31, 1997, only 8 were received. While work had been completed on 15 agreements, only one recipient submitted a summary of research. The details for these results are shown in Appendix III, Chart 4.

Description	Number
Recipients Who Should Have Submitted Annual Reports to CASI	30
Recipients Who Submitted Annual Reports to CASI	7
Final Reports CASI Should Have	15
Final Reports CASI Has	1
Total Reports CASI Should Have	57
Actual Reports CASI Has	8

Figure 4 - Summary of Recipient Data CASI Should Have and Has, as of March 31, 1997

OBSERVATIONS AND RECOMMENDATIONS

Equipment and Other Property Reporting

Recipients must only submit an annual inventory report when they have Government-furnished equipment or equipment acquired with Government funds, as required in §1274.923. Industry commented that equipment reporting requirements that are not applicable should be deleted from agreement text.

Our review disclosed:

- None of the agreement files reviewed contained the required annual inventory report;
- CO's did not know if equipment reports were received, as they rely on the COTR or Center property office to handle such reporting;
- The Agencywide procurement data system does not contain property information; and
- Agreement files did not document the results when a recipient requested permission to acquire equipment or transfer Government equipment from existing NASA contracts.

CO's Not Ensuring Recipients Comply With Reporting Requirements

Our discussions with CO's on ensuring that recipients comply with agreement reporting provisions revealed that the CO's:

- Considered the recipient's success in completing the project more important than meeting the reporting provisions;
- Had no intention of ensuring compliance with the reporting provisions unless such reporting impacted the work being done or was a payment milestone element;
- Included reporting provisions in the agreement only because the Handbook requires their use;

- Were often not familiar with the reporting requirements;[13] and

- Would not use Handbook provision §1274.202(c)(4), which prescribes that the last milestone payment be large enough to ensure the recipient completed its agreement responsibilities, to withhold funds for not complying with non-milestone requirements.

Provisions Omitted or Modified Without Approval

The Handbook specifies the provisions that are to be incorporated in all cooperative agreements. A deviation approved by the Associate Administrator for Procurement is required to omit or modify a prescribed provision. Code H was asked in February 1997 to provide a list of approved deviations. None was provided for the reporting requirements.

Appendix III, Chart 3, shows the provisions at §1274.912 (Patent Rights), §1274.921 (Publications and Reports), and §1274.923 (Equipment and Other Property), for the 68 agreements included in our review. The agreement data shows:

- Fifty-one (or 71 percent) contained either the full text or a reference to each provision;

- Nine excluded the patent rights, publications and reports, and equipment reporting provisions; and

- No required requests for deviation were contained in the agreement files reviewed.

CO's said the provisions were excluded because they were not related to the specifics of the agreement.

[13] See P&A-96-001. The COs' unfamiliarity with the patent rights provision echoed what we were told during our 1996 review of NASA's new technology reporting. CO's candidly said that they were not aware that a recipient must submit an annual technology report. Several admitted that they should have been familiar with this requirement since they had been in their present position many years.

OBSERVATIONS AND RECOMMENDATIONS

Copies of Basic Cooperative Agreements Are Not Being Properly Distributed

According to §1274.207 of the Handbook, copies of cooperative agreements and modifications should be provided to the payment office, COTR, CASI, and any other appropriate recipient. This section also requires that a copy of the statement of work, contained in the recipient's proposal as accepted by NASA, should be sent to CASI.

A copy of any agreement containing the patent rights provision should also be sent to the Center's commercial technology office. Therefore, we focused on determining whether required documents were being sent to CASI and the Center commercial technology offices. Our review determined that these provisions were not normally implemented.

Documents Sent to CASI

Failure to submit copies of agreements, and performance and final research reports to CASI hinders NASA's accomplishment of its mission to communicate scientific knowledge and understanding. For example, CO's sent copies of only ten basic agreements to CASI; a reporting rate of 14 percent. As shown in Figure 5, Headquarters is the only location that sent copies of all agreements to CASI. MSFC, with the highest number of reviewed agreements at 23, has not sent any agreement copies to CASI.

Center	Number of Agreements	
	In Sample	Sent to CASI
ARC	6	4
GSFC	20	1
HQ	3	3
LaRC	7	0
LeRC	9	2
MSFC	23	0

Figure 5 - Number of Agreements CO's Sent to CASI

Appendix III, Chart 4, identifies by agreement number the basic agreements sent to CASI.

OBSERVATIONS AND RECOMMENDATIONS

Documents Sent to Commercial Technology Office

We selected MSFC to test for the number of agreements sent to the Commercial Technology Office (CTO). We were advised that of the 23 active agreements, CTO staff there knew that only ten contained the patents rights provisions. Unless the CTO is provided a copy of the agreement by the procurement office, it is unable to ensure that a recipient is complying with the required new technology reporting provisions.

Reporting Requirements Summary

Given the Agency's experience with cooperative agreements with large commercial firms, we believe NASA management should reassess existing reporting requirements and determine whether additional standards are necessary or existing ones be eliminated.

The "Best Practices" section of this report lists activities management may want to incorporate when revising these standards. As mentioned in the "Industry Participation" section, some respondents want requirements deleted that are not applicable to particular cooperative agreements. While we did not identify any instance in which either a recipient or CO was penalized for not complying with requirements, this does not mean that there were no negative consequences experienced.

Recommendation 2

We recommend that the Associate Administrator for Procurement identify required provisions for each agreement and give CO's discretion to decide what provisions, e.g., patent rights, publications and reports, and equipment and other property, are optional. Consider attaching to the agreement a list of reporting requirements.

Management's Response

NONCONCUR. The provisions for cooperative agreements with commercial firms in the Grant and Cooperative Agreement Handbook are considered appropriate and the minimum necessary to adequately protect the rights of NASA and the recipient based on the nature and purpose of cooperative agreements with commercial firms. In those cases in which a provision may be inappropriate, a deviation should be sought. With respect to attaching a listing of reporting requirements, see our response to Recommendation 3.

OIG's Evaluation of Management's Response

Management's response states that the provisions in the Grant and Cooperative Agreement Handbook are those considered appropriate and the minimum necessary to protect the rights of NASA and the recipient. If this is the case, management is obligated to take the necessary action(s) to enhance CO's understanding of the minimum requirements, including the importance of obtaining required deviations.

Recommendation 3

We recommend that the Associate Administrator for Procurement ensure compliance with cooperative agreement reporting requirements.

Management's Response

PARTIALLY CONCUR. Code H will assess with the Chief Information Officer (Code AO) the advisability of a provision or other mechanism to highlight all cooperative agreement reporting requirements. This should assist both NASA and recipient personnel in better identifying and complying with reporting requirements.

OIG's Evaluation of Management's Response

We consider this responsive. The OIG requests a copy of actions taken as a result of the described assessment.

Recommendation 4

We recommend that the Associate Administrator for Procurement ensure CO's and COTR's understand what their responsibilities are per the Handbook. For example, CO's need to understand why it is important that a copy of a basic cooperative agreement be sent to CASI and why a recipient should send research reports there.

Management's Response

PARTIALLY CONCUR. It is an unrealistic objective to ensure that CO's and COTR's understand their responsibilities. We can provide draft copies of regulations to the Centers for comment to help ensure understanding, we can conduct training sessions, we can be available to help resolve misunderstandings, and we can do spot checks as in the case of OIG and Procurement Management Reviews. All of these things have been done in the case of cooperative agreements with commercial firms. However, we cannot ensure that personnel will in all cases read, understand, and adhere to published policy.

OIG's Evaluation of Management's Response

Management's response meets the intent of our recommendation when considered with the comments provided by management for Recommendations 2, 3 and 13.

Recommendation 5

We recommend the Associate Administrator for Aeronautics and Space Transportation Technology assess the minimal reporting of new technologies by large businesses having cooperative agreements.

Management's Response

CONCUR. The Commercial Technology Division, Office of Aeronautics and Space Technology, provides an annual commercial technology inventory report to the Deputy Administrator. This report includes an assessment of large businesses' performance of new technology reports from contracts. The Commercial Technology Division will include an assessment of large business performance in reporting new technologies under cooperative agreements in future inventory reports.

OIG's Evaluation of Management's Response

We consider this responsive for internal reporting purposes only; however, more attention needs to be given to the low reporting of new technologies by recipients.

Recommendation 6

We recommend the Associate Administrator for Aeronautics and Space Transportation Technology (OASTT), in coordination with the Associate Administrator for Procurement, implement the necessary corrective actions to improve new technology reporting to enhance the commercial technology mission.

Management's Response

PARTIALLY NONCONCUR. OASTT views this recommendation to be redundant with the set of recommendations included in the Inspector General's previous report P&A-96-001, Review of NASA New Technology Reporting. The NASA Commercial Technology Management Team, in coordination with the Office of Procurement and the Office of General Counsel, are presently in the final stages of reporting back to NASA management a reengineered new technology reporting process and program. This new process covers all new technology reporting requirements contained in contracts, grants, and cooperative agreements; as well as invention disclosures required of civil servants. The implementation of the recommendations to report P&A-96-001 will meet the intent of this recommendation, and as such, no further action will be necessary.

OBSERVATIONS AND RECOMMENDATIONS

OIG's Evaluation of Management's Response

We will await management's response to P&A-96-001 and determine its relation to cooperative agreements.

OBSERVATIONS AND RECOMMENDATIONS

OTHER ADMINISTRATIVE MATTERS

Our review identified several administrative matters needing management's attention for effective program management. Our findings are summarized in the following paragraphs, and include:

- The Aerospace Industry Technology Program (AITP) provisions should be evaluated for Agencywide application to cooperative agreements generally;

- Information in the Agencywide procurement data system needs to be validated;

- NASA awarded several agreements that we believe should have been awarded as contracts. In each, NASA appeared to be the primary beneficiary and not the public, and acquired goods or services;

- The Handbook guidance does not address cooperative agreements that are of long duration, have a high estimated cost, or meet the criteria for a major NASA system;

- NASA's technology tracking system erroneously included cooperative agreements that do not contain the patent rights provision; and

- Coordination between CO's and COTR's needs to be improved.

AITP The objective of the AITP is to strengthen U.S. industry by advancing high-payoff aerospace technologies. Industry defines these technologies as those that will lead to important commercial products and applications and may significantly support future NASA missions. AITP used cooperative agreements as the executing agreement because they allow NASA more flexibility than contracts, more control than grants, and IR&D funds can be used as part of the recipient's cost share.

The AITP characteristics include:

- Industry led and executed applied research and development projects that may:

— Be used for a NASA mission and by a private/industry customer;
— Be used by the aeronautics industry;
— Be used in the aerospace and/or non-aerospace industry; and
— Promote private sector use of unique resources and assets of space.

- Proposal team (two for profit companies required to lead each proposal) must contribute about 50 percent of the project costs, thus putting the team at risk. This risk:
  — Helps ensure the project is indeed commercial;
  — Makes the project a team investment with more latitude and control; and
  — Includes cash and IR&D funds with noncash values guided by OMB Circular A-110.

- Cooperative agreements will be used as the executing instrument.

Project proposals were evaluated according to four equally-weighted criteria: potential broad-based economic benefits, adequacy of plans for eventual commercialization, technical merit of the proposed project, and quality of management commitment and planning.

AITP Provisions Differ

While the AITP project requires that the recipient's contribution is to be equal to or greater than 50 percent, it differs from other cooperative agreements with commercial firms in the following ways:

- Sources permitted for the recipient cost sharing:
  — Cash from company profit or by venture capital external to the recipient;
  — Properly accountable intellectual property; and
  — IR&D funds (Since a key goal of AITP is to maximize the degree of company commitment to commercialization, AITP will consider the applied IR&D resources, although allowable, as less desirable than other cash contributions.).

- Other allowable resources that will be evaluated but not counted toward the 50 percent cost share objective:
  — Cash/noncash contributions provided by state or local governments;

— Noncash contributions by Federal laboratories that are members of a proposing team; and
— Tangible products of past Government funding that are legally owned by recipients.

- Co-funding of AITP projects with other Government agencies or programs is not allowed.

- Recipients must expend sufficient, new, non-Federal funds each year to meet the cost sharing requirement.

These specific cooperative agreement provisions were developed using input requested from industry. The intent of the AITP is to adopt commercial practices with primary emphasis on weighting of resource contributions and the associated risks. If recipients were investing cash from company profits or venture capital, AITP assigned a higher rating to recognize the recipient's greater involvement and commitment and risk. This increases the assurance that projects will be successfully completed and achieve commercialization.

NASA management responsible for the AITP believe the program is demonstrating the successful transfer of NASA technology to industry to enhance their competitiveness. With emphasis on adopting industry's business practices to foster commercialization and the application of different cooperative agreement provisions, NASA management should evaluate AITP provisions to determine NASA application of the approach and methodology employed.

Incorrect Data in Agencywide Procurement Tracking System

Code H uses information maintained in the Financial and Contractual Status (FACS) system for various details on cooperative agreements with commercial firms. FACS is an Agencywide system used to track financial and procurement data. The TechTracS, maintained and used by Code R, also incorporates and uses FACS data. We obtained from FACS information on estimated cost, award date, name of recipient, FY 1996 obligations, and completion date (see Appendix III, Charts 1 and 2).

When comparing this data to the supporting records in an agreement's official procurement file, we found that FACS contained incorrect

estimated costs and completion dates for several agreements. Two agreements had miscoded data on size of business.[14]

During our review, we informed an individual who maintains the FACS data base of our concerns and discrepancies found. We were advised that several attempts have been made to have the responsible Center officials correct these and other known discrepancies. However, efforts by Code H have generally not improved the accuracy of the reported information.

Inaccurate Estimated Costs

As of September 30, 1996, the FACS system did not accurately reflect the estimated cost of agreements with large commercial firms. FACS reported $341 million as the total estimated cost of the agreements in our sample. However, when comparing this amount to information in selected agreement files, we found the total estimated costs to be understated by at least $749 million. The primary reason for the discrepancies was due to CO's not correctly determining and reporting the estimated cost on these agreements.

While estimated cost data is not generally distributed outside the Agency, it is used by NASA management for internal purposes. Figure 6 lists the agreements for which the reported estimated cost differs from the supporting records in an agreement's official procurement file. The bulk of the difference is due to significantly understating the estimated cost of NCC8-115.

[14] The FACS data did not include NCC8-30 since it was incorrectly entered in the procurement data base as a small business. It should not have included NCC5-161 since it is a small business.

Agreement	Estimated Cost ($000)		Difference Under <Over>
	Per FACS	Per CA File	
NCC2-9002	$11,129	$3,864	$<7,265>
NCC2-9006	$3,000	$2,658	$<342>
NCC3-379	$2,000	$1,000	$<1,000>
NCC3-413	$8,408	$4,000	$<4,408>
NCC3-426	$3,455	$1,137	$<2,318>
NCC8-81	$531	$1,039	$508
NCC8-102	$30	$100	$70
NCC8-113	$30	$100	$70
NCC8-115	$40,786	$805,144	$764,358
NCCW-34	$1,278	$958	$<320>
NCCW-43	$715	$536	$<179>
Total	$71,362	$820,536	$749,174

Figure 6 - Inaccurate Estimated Costs for Selected Agreements

FACS data is recorded via an Individual Procurement Action Report (NASA Form 507B, item 66) that is prepared by the CO. A CO enters the estimated cost of each new award, i.e., the amount of NASA funding to be provided to a recipient. As Figure 6 suggests, many CO's entered an incorrect amount in this block. Some CO's considered estimated costs as the amount of incremental funding NASA provided; others viewed it as the total amount of resources provided by a recipient and NASA; and one regarded it as NASA's noncash and cash contributions. Specifically:

- NCC2-9002: FACS data included both the recipient's and NASA's contributions. The correct estimated cost was $3,864,000, which is the Government's share. Similar problems were noted on NCC3-379, NCC3-413, NCC3-426, NCCW-34, and NCCW-43.

- NCC2-9006: FACS reported the Government's cash ($2,658,000) and noncash ($342,000) contributions. The correct amount is NASA's cash contribution.

- NCC8-115: Instead of entering $805,144,000 as the estimated cost of this agreement, the CO entered $40,786,000, which is the

amount of incremental funding NASA provided on it. Similar problems were noted on NCC8-81, NCC8-102, and NCC8-113.

Incorrect Completion Dates

Figure 7 lists 15 agreements where the reported completion date differed from the official procurement file as of September 30, 1996. Because this information is used for internal management purposes, Code H should ensure that the data in its tracking system is accurate.

Agreement	Per FACS	Per File
NCC2-9002	12/29/96	6/29/97
NCC2-9003	11/15/95	9/30/96
NCC3-349	2/9/97	2/9/98
NCC3-356	8/12/96	9/30/97
NCC3-359	12/17/99	10/16/96
NCC3-379	2/10/97	4/10/97
NCC3-413	11/15/97	7/31/97
NCC3-426	9/20/97	7/31/98
NCC5-101	2/22/97	12/22/97
NCC5-161	12/14/96	12/13/96
NCC8-35	8/30/96	9/30/96
NCC8-43	4/30/96	9/30/96
NCC8-50	6/1/96	9/15/96
NCC8-81	4/30/97	12/23/96
NCCW-43	4/23/96	4/24/96

Figure 7 - Differences in Reported Completion Dates

Improper Procurement Instrument Used

Cooperative agreements are used to carry out a public purpose of support or stimulation. For example, the objective of a cooperative agreement can be to improve the competitiveness of American industry by creating new and less expensive products or by increasing exports. In contrast, NASA uses contracts whenever the principal purpose is to acquire goods or services for the direct benefit or use of the Agency. During our review, we identified four agreements in which NASA appeared to be the beneficiary, as the agreement stated that NASA would have title to the equipment acquired:

- NCC1-191
  - — DC-X internal composite intertank
  - — Composite isogrid intertank
  - — Ground based intertank with payload bay doors
  - — High-temperature composite control surface component

- NCC1-192
  - — Multi-panel array of metallic TPS panels on substructure
  - — Multi-panel array of C/SiC TPS panels on substructure

- NCC1-193
  - — Full-scale intertank segment
  - — Full-scale segment of a wing box
  - — Full-scale segment of a thrust structure

- NCC8-39
  - — Composite LH_2 Tank and the Recipient shall have title to the panels

These cooperative agreements were awarded in mid-1994, when NASA first began using this instrument with for-profit firms. Work on them either has been or is nearing completion. We believe NASA should ensure that its Center procurement staff understand the situations under which a cooperative agreement can be used.

Long Duration, High Estimated Cost, or Major NASA System

When NASA prepared its current Handbook, it envisioned cooperative agreements would have an estimated value between $5 million and $10 million and be 2 to 3 years in duration. Of the 68 agreements in our sample, 8, or 12 percent, had an initial estimated cost of more than $10 million, and 6, or 9 percent, had a planned duration of more than 3 years. NCC8-115 for the X-33 Program meets NASA's definition of a major system; a use of a cooperative agreement not foreseen when the Handbook was prepared. Based upon NASA's experience with these agreements and its plans to increase their use, management should consider a reassessment of existing regulations. Additional or different requirements should be considered and implemented for those agreements outside the existing parameters, especially for projects meeting NASA's major system criteria.

OBSERVATIONS AND RECOMMENDATIONS

All Agreements in TechTracS Do Not Contain Patent Rights Provision

TechTracS imports data from FACS on new procurement instruments (contracts, grants, and cooperative agreements) awarded. Only those procurement instruments that contain the new technology or patent rights clause should be in TechTracS. FACS can identify those contracts that include the new technology provision but cannot do this for cooperative agreements. To compensate, TechTracS management assumes that all agreements coded as research and development contain the patent rights provision. We found the assumption to be untrue. We identified 10 agreements that should not be in TechTracS since they do not contain the patent rights provision (see Appendix III, Chart 3).

CO/COTR Coordination

While the Handbook does not require use of a formal delegation of responsibilities from the CO to the COTR, several CO's and COTR's remarked they support using a formal delegation that addresses an agreement's reporting requirements. Further, industry remarked there is poor interaction between NASA's technical and acquisition staff. Management should consider requiring that a NASA Form 1634 delegation specifically address milestone verification prior to payment and the required reporting.

CO's at GSFC use a standard form for COTR delegation (NASA Form 1634) to identify the specific duties to be performed by the assigned COTR They frequently add the requirement for a COTR to confirm completion of all performance milestones. This conforms to Handbook §1274.202(c)(4) which requires the technical officer to verify completion of each milestone to the grants officer as part of the payment process.

Handbook §1274.920, "Responsibilities of the NASA Technical Officer," is silent on a verification requirement and probably should be revised to include such a requirement to ensure it is not overlooked.

Procurement Management Survey Reports

We reviewed for each NASA Center the most recent procurement management survey report issued by the Office of Procurement. Ranging from a survey in 1991 at Stennis Space Center (SSC) to one at GSFC in December 1996, except for the latest survey, they rarely mention or detail any findings respective of cooperative agreements. To support the Agency's move to increased use of cooperative agreements, especially those with large commercial firms and

considering the results of this review, we believe the procurement management survey process should place added emphasis on the Centers' adherence to cooperative agreement policies and procedures.

Other Administrative Matters Summary

NASA management should reassess existing administrative requirements and determine whether additional standards are necessary or existing ones be changed or eliminated.

Recommendation 7

We recommend that the Associate Administrator for Procurement evaluate the provisions included in the AITP, which differ from the current policies, to determine their applicability to all NASA cooperative agreements.

Management's Response

CONCUR. Code H will review the AITP provisions and determine their applicability to other NASA cooperative agreements.

OIG's Evaluation of Management's Response

Management's proposed action is responsive to our recommendation. The OIG requests a copy of any new guidance or change issued.

Recommendation 8

We recommend that the Associate Administrator for Procurement ensure accurate data is in FACS. Correct errors found for completion dates, estimated costs, and size of business.

Management's Response

CONCUR. Code H will work with the Centers to ensure that errors in FACS are corrected.

OIG's Evaluation of Management's Response

Management's proposed action is responsive to our recommendation.

Recommendation 9

We recommend that the Associate Administrator for Procurement revise instructions for completing Item 66 (estimated cost or fixed price) on NASA Form 507B. Clearly specify what the estimated cost should be for cooperative agreements with commercial firms.

Management's Response

CONCUR. Code H will revise the instructions for completing items 66 on NASA Form 507B.

OIG's Evaluation of Management's Response

Management's proposed action is responsive to our recommendation.

Recommendation 10

We recommend that the Associate Administrator for Procurement revise guidelines to include requirements that are applicable to long duration or large dollar award agreements.

Management's Response

NONCONCUR. As the report states, the significant majority of cooperative agreements awarded to date are relatively low dollar value agreements. 87% of the active agreements involve NASA contributions of $10M or less and 93% involve NASA contributions of $20M or less. Only two agreements would meet the definition of a major system. As in the case of major systems contracts, deviations from established policy are required to deal with the vagaries of major system requirements. Code H feels that the policies in the current Grant and Cooperative Agreement Handbook address the vast majority of cooperative agreements and that whatever policies are established would need to be tailored for unusually large agreements.

OIG's Evaluation of Management's Response

Based upon a meeting with management, we clarified the application and intent of our recommendation. Management agreed to revise the Handbook to include a provision that requires CO's to seek guidance from Code H for any planned cooperative agreement of long duration or large dollar amount.

Recommendation 11

We recommend that the Associate Administrator for Procurement require use of formal COTR delegation letters as a means to ensure that COTR's understand what they must do.

Management's Response

CONCUR. Code H will develop a draft COTR delegation letter and require it be used for cooperative agreements with commercial firms.

OIG's Evaluation of Management's Response

Management's proposed action is responsive to our recommendation. The OIG requests a copy of the delegation letter developed.

OBSERVATIONS AND RECOMMENDATIONS

Recommendation 12

We recommend that the Associate Administrator for Procurement revise Handbook §1274.920 to include the requirement that the NASA COTR verify completion of each milestone to the CO prior to payment.

Management's Response

NONCONCUR. The requirement for Technical Officer verification of completion of each milestone is contained in §1274.202(c)(4). Since this is an internal NASA matter, it need not be spelled out in the cooperative agreement itself.

OIG's Evaluation of Management's Response

We met with management to understand their response. We were told that the planned COTR delegation letter would include the requirement that the NASA technical officer would verify completion of each milestone to the CO. Such action meets the intent of our recommendation. The OIG requests a copy of the COTR delegation letter developed.

Recommendation 13

We recommend that the Associate Administrator for Procurement ensure the procurement management survey process addresses Center adherence to cooperative agreement policies and procedures.

Management's Response

CONCUR. Code H will ensure that the Procurement Management Review Team is made aware of the importance of reviewing cooperative agreements with commercial firms and the key issues which should be scrutinized.

OIG's Evaluation of Management's Response

Management's response meets the intent of this recommendation.

INDUSTRY PARTICIPATION

Given the cooperative and participative objectives of using cooperative agreements (CA's), we solicited and evaluated recipient views on their experiences with this type of procurement instrument. We sent to 26 industry partners questionnaires covering 61 agreements. Nineteen firms returned 26 responses that covered 37 agreements—resulting in a response rate of 73 percent. We gave NASA management copies of the responses received. A sample questionnaire is found in Appendix VI. Each questionnaire contained a standard set of questions to which we added applicable questions unique to the subject agreement. A summary of the comments received from industry partners is found below.

Do you consider the CA a success in that the expected result/benefit was achieved?

Recipients are virtually unanimous in stating that the expected result/benefit was achieved. They favor using the cooperative agreement process; and found that it provides needed flexibility and reduces the administrative burden on them. Several respondents indicated that through use of cooperative agreements their company was able to work with Government personnel on activities of mutual interest, and gain technical insight and access that otherwise would have been difficult. Some recipients believe that collaboration actually led to exceeding target performance goals. An assessment of the success in fostering/developing technology to promote commercialization is sometimes premature because activities are still ongoing.

Would your firm participate in future CA's should the opportunity be available?

Most recipients favor future use of cooperative agreements with the Government; however, some respond with qualification. A future agreement must bring a benefit to the recipient and be in line with the company's competency and business objectives. One company said it had no interest in the commercialization of technology unless it enhances the value of its own processes or products. Foremost with some companies are the conditions and flexibility in negotiating provisions about intellectual property.

One company was concerned that the 50 percent resource sharing ratio makes a cooperative agreement less attractive, as increased cost sharing levels result in increased administrative costs and efforts. Accordingly, the company stated, the more that terms of the agreement allow industry to use its commercial systems and procedures, the more attractive cooperative agreements become even at the 50 percent cost sharing level.

INDUSTRY PARTICIPATION

Do you consider the collaboration between NASA and your firm adequate on the CA?

There are success stories, yet more than half of the recipients report that collaboration with NASA could be improved. Less than optimum conditions stems from NASA organizational changes; lack of standardization for handling agreement changes, reporting procedures and agreement close-out; poor interaction between technical and acquisition staff; and a need to better define the roles and responsibilities of the parties involved. One respondent noted that "NASA needs to move more from its traditional role as a customer to a collaborator with the [recipient]."

Did any technological advances or commercialization opportunities result from the CA?

Frequently, recipients report that technology advances and commercialization opportunities indeed resulted from the cooperative agreement. Examples include interface technology, downloading or manipulating data, and hardware and process improvements. Few responses mentioned required formal new technology reports to NASA; however, one recipient noted that new technology was part of a deliverable on their agreement. While many efforts are still underway, commercialization of resultant technology often remains unexplored by recipients. Some improvements have already been incorporated into commercial products available to the public. See report section "Commercialization" for further discussion.

What advantages were noted because of performing this effort through a CA rather than a contract?

Industry recognizes that the cooperative agreement award process is more flexible and faster than that for contracts. Recipients applaud significantly fewer administrative reporting requirements that allow them freedom to focus more on accomplishing technical objectives of the cooperative agreement. Equal praise is given to protection of proprietary data under a cooperative agreement, and use of IR&D funds to allow industry to partially mitigate financial risk. One recipient said that a cooperative agreement allowed for the opportunity to develop and commercialize technologies.

What disadvantages were encountered because of performing this effort through a CA rather than a contract?

Disadvantages of using cooperative agreements over contracts vary; each recipient typically has a unique situation. About 20 percent of the recipients do not identify a disadvantage. The four primary reasons given are that:

- NASA and/or the recipient is new to this process and must learn from experience; neither the personnel of Government contracts

nor company accounts know how to handle cooperative agreements.

- Cooperative agreements do not allow for profit.
- Cash outlay is not easy when the recipient must match Government funding.
- Non-performance by other members of a cooperative agreement team may adversely impact other team members, e.g. non-payment of completed milestones or industry criticism.

Does your firm have any comments on how the CA process can be improved?

Recipients shared with us their strong desire for NASA to keep the cooperative agreement process simple. Recommendations include:

- Cooperative agreements should be less like contracts; NASA should avoid unnecessary administrative procedures; cost and pricing data requested by NASA is excessive.
- Milestone payments to the recipient could be processed faster.
- Payment provisions should address circumstances involving multiple team members.
- Disputes should be resolved by an independent judge/arbitrator and not a NASA employee.
- Reporting requirements that are not applicable to a particular cooperative agreement, i.e., use of Government-owned equipment, should be deleted from the agreement text, when not necessary.

REMARKS SPECIFIC TO A COOPERATIVE AGREEMENT

Besides the general responses summarized above, we asked recipients to address a number of questions unique to a particular cooperative agreement. These solicited responses have included both favorable and unfavorable remarks that we note in brief below.

FAVORABLE	UNFAVORABLE
A consortium has a range of expertise that is not possessed by any one member alone.	Differences between organizational cultures of NASA and industry contribute to inefficiencies or disagreements.
Agreements with multiple year renewal options tend to have timely approval and funding.	One company had difficulty communicating the cooperative agreement concept to a subcontractor.
Use of Government-provided facilities at no cost contributes significantly to the success of the agreement's program.	With respect to the Advanced Research Projects Agency (ARPA), having two Federal agencies providing funding created more administrative effort in that separate accounts had to be maintained with applicable statements of work for each.
One respondent is very serious about pursuing commercial opportunities created by their cooperative agreement and is very excited.	Cooperation and collaboration was limited. Organizational units within NASA seemed to be competing with the concepts and processes the recipient was trying to achieve on the agreement.
Use of a company's systems and procedures makes use of cooperative agreements more attractive. Greater emphasis on this would improve use of cooperative agreements.	NASA should be more flexible by using some of ARPA's formats. Many of the provisions in the NASA agreement are direct from the FAR.
Following jointly-developed design guidelines held down costs and the number of changes.	Lack of prompt decision making by NASA.

COMMERCIALIZATION

One of NASA's strategic goals is to share leading-edge technology with the U.S. industrial community. Cooperative agreements represent a vehicle for NASA to transfer technology to businesses for further development and application, and to enhance their competitiveness. NASA management asked us to identify commercial results produced by using cooperative agreements.

RECIPIENT COMMERCIALIZATION OPPORTUNITIES

In our questionnaire to industry we asked, "Did any technological or commercialization opportunities result from the cooperative agreement?" In responding to this question, recipients identified many accomplishments and potential commercial applications from the research conducted. Examples reported to us are included in Appendix VI.

AEROSPACE INDUSTRY TECHNOLOGY PROGRAM (AITP)

NASA implemented the AITP to advance aerospace technologies that would promote commercialization opportunities within the private sector. In June 1994, NASA issued CAN OACT-94-1, "Industry-Led Research and Development Projects: A Cooperative Agreement Notice for the AITP." Work on the nine cooperative agreements awarded under this CAN should be completed between February 1997 and March 1998.

We discussed the Project status with a NASA official and the extent to which the Project's commercialization activities had progressed. We found that no commercial products have been fully developed and/or made available to industry because more time is needed to complete the development cycle. Based upon that discussion and information gained by reviewing the nine agreements, we can summarize the following potential commercial applications identified for each AITP cooperative agreement.

COOPERATIVE AGREEMENT PROJECT	COMMERCIALIZATION / NASA APPLICATION
Advanced Materials for Small Turbines	• Aerospace propulsion and future auto and marine gas turbines • Increase U.S. market share from 67 percent to 85 percent • Shuttle main engine and launch systems
Improved Passive Acoustic Suppression of Aircraft Engines	• Enhances competitiveness and market share in aircraft and automotive industry • Highly efficient sound absorbing engines • Passive multi-segmented liner to enhance propulsion efficiency

COMMERCIALIZATION

Computational Aeroacoustics Analysis System	• Develop and test critical flight components to prove readiness • Improved design of space structural elements • Enhance performance, life-cycle of space assets • Reduce the cost of validating space structures
Low-Cost Cryocoolers for High Temperature Superconductor Communication Filters	• Potential applications include spaceborne instrumentation, ground station communication, next generation high speed workstations, and interference free cellular telephones • Smaller, more efficient and cheaper space coolers • Improved pulse tube technology efficiency • Moving parts eliminated to extend the life of space systems
EHF Active Transmit Phased Array Beam, Agile Antenna	• Phased array elements can be mass produced to achieve affordable cost goals • Highest performance communication system for space applications • Enhances safer and more reliable space communication
Affordable Process for Manufacturing TiAl Engine Components	• New material payoff is in fuel-efficient aerospace engine products • Material is not inherently expensive • Lighter and more efficient material for space structures design • Material enhances performance and reduces cost of space systems
Millimeter-Wave Passive Imaging for Synthetic Vision on Mobile Platforms	• NASA will benefit from microwave link sounder, advanced millimeter-wave radiometry and signal processing • Night and inclement weather synthetic vision for high speed civil transport aircraft • Synthetic imaging system for space application • Enhances safety for astronauts
Solar Thermal Upper Stage Technology Demonstrator	• Develop and test the critical flight-type components to prove concept readiness for a full-scale development process • Cheaper and more efficient propulsion systems • Lowers weight of launch vehicles
Precision Casting Via Advanced Simulation and Manufacturing Control	• Enhances competitiveness of U.S. manufacturing industries which depend on casting technologies-launch vehicle, automotive and foundry • Enables expensive components to be less expensively produced from casting

BEST PRACTICES

Through interviews, and reviews of local Center procedures, cooperative agreement documents, and other related information, we identified several noteworthy features, procedures, and processes that we consider as "best practices." Generally, these instances allow for improved management and administration of cooperative agreements. They are described below for NASA management's consideration and possible implementation.

Resource Sharing Given the collaborative nature of the work being performed, NASA should establish standard agreement paragraphs that would include provisions for certifications, verifications, and weighted contributions. This would help ensure that the parties are adhering to the agreed upon resource commitments.

Certifications. GSFC required the recipient to certify as part of the final payment milestone that they met the agreement's stated sharing requirements.

Verifications. Upon completing an agreement, MSFC and LaRC require the recipient to identify any payments received in excess of NASA's share of allowable and allocable costs incurred. The parties then mutually agree to continue performance using the excess funds, or NASA may require a refund.

LaRC includes in the agreement a paragraph that the NASA COTR will verify, at least annually, that the recipient made all reasonable efforts to provide its negotiated resource contributions.

An agreement at MSFC states that NASA and the recipient shall periodically (at least annually) review actual versus planned resource contributions to verify that reasonable efforts are being made by the other party to provide the negotiated resource contributions.

Weighted Contributions. The AITP recognized and evaluated the type and source of a recipient's contributions in achieving its commitment to commercialization. The evaluation:

- Rewards nonreimbursable contributions over those that are reimbursable;

- Does not count "neutral" contributions by either the Government or recipient toward cost-share goals, i.e., cash or noncash

contributions provided by state or local governments; in-kind contributions by a Federal laboratory not a member of the proposing team; or recipient-owned equipment obtained under past Governmentally-funded activities; and

- Requires the recipient to expend new non-Federal funds each year that must equal or exceed the cumulative total of the AITP funds expended for the project.

Such evaluations recognize and reward recipients who are truly sharing their non-reimbursable contributions that maximize their degree of commitment to the project.

Reporting Tied to Milestones

MSFC tied the submission of an inventory of inventions to a milestone. Since NASA makes milestone payments when the specified activity is complete, adding the reporting requirement to the milestone will ensure the needed reporting is provided. This practice has merit when it has been determined that certain reporting is necessary and can be linked to a specific milestone.

Agreement Synopsis

Cooperative agreement files at GSFC, LaRC, and MSFC consistently contained summary data of recipient and NASA contributions (amounts, percentages and types), and other pertinent facts supporting the CO's award recommendations. An extant agreement synopsis or memorandum to the file allows for a more timely review of the agreement status and applicable decisions made.

Public Information

Beyond addressing data rights (an issue not covered by this review) MSFC includes in cooperative agreement text a requirement that both parties agree to specific published reports, trade data, processes, and technology to be released as public domain. Listing such items in the agreement allows for a clear and mutual understanding of what information can be made available.

GENERAL COMMENTS

Each NASA employee interviewed during this review was very generous in their time and assistance provided to the team. We especially appreciated the candor with which NASA employees described their experiences with components of the cooperative agreement process. Key players in the cooperative agreement arena shared with us some challenges that impact the Agency's efforts of moving toward a new way of doing business in a Government environment faced with dwindling resources.

We specifically commend the procurement staff at the Marshall Space Flight Center for their innovation in streamlining the cooperative agreement process while being aggressive in protecting the Government's interests.

In some instances, we found that the NASA acquisition staff has yet to fully adopt the cooperative agreement process as a new way of doing business, e.g., administering cooperative agreements as though they were contracts. Because of the newness of using this type of cooperative agreement, NASA needs to develop and practice applicable close-out procedures.

We appreciate the time and care industry officials took to answer our questionnaire. We found the responses positive for NASA's partnering activities. The responses will enable NASA management to consider industry's comments as they assess the need to change and improve the Agency's use of cooperative agreements.

ABBREVIATIONS

AITP	Aerospace Industry Technology Program
ARC	Ames Research Center
ARPA	Advanced Research Projects Agency
CA	Cooperative Agreement
CAN	Cooperative Agreement Notice
CASI	Center for Aerospace Information
CFR	Code of Federal Regulations
CO	Contracting Officer
COTR	Contracting Officer's Technical Representative
FACS	Financial and Contractual Status System
FAR	Federal Acquisition Regulation
FMM	NASA Financial Management Manual
FY	Fiscal Year
GSFC	Goddard Space Flight Center
HQ	NASA Headquarters
IR&D	Independent Research and Development
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
KSC	Kennedy Space Center
LaRC	Langley Research Center
LeRC	Lewis Research Center
MSFC	Marshall Space Flight Center
NASA	National Aeronautics and Space Administration
NHB	NASA Handbook
NMI	NASA Management Instruction
NPG	NASA Procedures and Guidelines
NTR	New Technology Reporting
OIG	Office of Inspector General
OMB	Office of Management and Budget
SSC	Stennis Space Center
STI	Scientific and Technical Information
TechTracS	Technology Tracking System
TM	Technical Monitor
US	United States
USC	United States Code

APPENDICES

APPENDIX I - BACKGROUND

BACKGROUND

Because of the National Performance Review (NPR), participation in the Advanced Research Projects Agency's (ARPA) Technology Reinvestment Program (TRP), the High Performance Computing Initiative, and a strong sense within NASA that cooperative agreements with industry are an appropriate way to carry out certain assistance and partnership activities, NASA began to increase its use of them. In February 1994, the Associate Administrator for Procurement issued a draft cooperative agreement as formal direction to NASA's procurement officers. This draft covered negotiations with commercial firms, both for ARPA and to support NASA's own programs. Based on NASA's experience using cooperative agreements during 1994 and 1995, the Agency in 1996 established uniform administrative procedures and requirements for cooperative agreements awarded to commercial firms (see Appendix VI).

Legislation, Authority, Policy

Figure 8, this Appendix, presents a chronology of the legislation and programs relating to NASA's authority and use of cooperative agreements. Pertinent comments that relate to this chronology are below.

Space Act

The National Aeronautics and Space Act of 1958, as amended, authorizes the NASA Administrator to enter into and perform such contracts, leases, cooperative agreements, or other transactions as may be necessary in the conduct of its work and on such terms as it may deem appropriate. The Associate Administrator for Procurement, under authority delegated by the Administrator, establishes for NASA uniform policies and procedures relating to the negotiation, award and administration of research grants and cooperative agreements with educational institutions, other nonprofit organizations and commercial firms.

Federal Grant and Cooperative Agreement Act

Congress characterized the Federal Grant and Cooperative Agreement Act of 1977, as a first step to eliminate the ineffectiveness and waste resulting from confusion over the definition and understanding of legal instruments used to carry out transactions and reflect basic [relationships] between the Federal Government and non-Federal entities. The Act is commonly known as the Chiles Act. This Act provides a foundation for current interpretation of a cooperative agreement as a procurement assistance instrument.

Chiles Act

National Performance Review (NPR)

The NPR recommended in 1993 that NASA be aggressive to devise a vigorous procurement program. As part of this effort, the NPR urged NASA to: (1) increase the use of cooperative research agreements to exploit more quickly high-performance computing techniques; and (2) extend the use of cooperative research agreement solicitations to for-profit organizations. Almost immediately, NASA began making provision for such awards. In September 1993, NASA made its first award of a cooperative agreement to a for-profit firm.

Technology Reinvestment Project (TRP) and the Advanced Research Projects Agency (ARPA)

Before February 1994, NASA had little experience with negotiating cooperative agreements with commercial firms, as practically all agreements were with educational institutions and nonprofit organizations. In 1994, NASA began using cooperative agreements with commercial firms to support the TRP, a program initiated by the Department of Defense's ARPA. ARPA solicited proposals, selected awardees, and transferred the selected proposals to NASA for negotiation and administration.

Policy Changes and Deviations

In February 1994, the Associate Administrator for Procurement issued a draft cooperative agreement as formal direction. Soon after that, the Associate Administrator for Procurement approved a blanket deviation to FAR 31.205-18, under which recipients could consider independent research and development (IR&D) funds as part of their cost-sharing contribution. The *Federal Register* announced an interim rule to this effect and further allowed that recipient IR&D costs could be reimbursable.

By June 1994, NASA established a class deviation from current guidelines to allow award of cooperative agreements to profit-making firms. Subsequent policy changes allowed NASA to use cooperative agreements with large commercial firms. Ultimately, NASA issued in July 1996, the current Handbook guidelines.

We were advised by Code H staff that the requirements in the Handbook were written for agreements that were 2 to 3 years in duration and $5 million to $10 million in value (Government's share only).

Cooperative Agreements Help Execute NASA's Strategic Plan

Cooperative agreements with commercial firms are a method for NASA to execute its Strategic Plan. The Plan is a top level strategy for articulating what NASA does, who its customers are, where it is going, and why.

Through several crosscutting processes, NASA delivers its products and services to customers. These processes include: providing

aerospace products and capabilities; generating knowledge; and expressing, transferring, and sharing information and results. Examples of using cooperative agreements to deliver NASA products and services include:

Provide Aerospace Products and Technology

- In CAN OACT-94-1, for the Aerospace Industry Technology Program (AITP), NASA solicited proposals to create industry-led teams to conduct research and development projects that have significant commercial potential, while providing capabilities needed to achieve future aeronautics and space strategic objectives.

- The TRP established the Hybrid Propulsion Demonstration Program joint Government and industry effort to foster and encourage hybrid rocket technology in commercial, civil and defense launch vehicle applications, and to continue to pursue a transition of this technology into operational systems.

Generate Knowledge

- In CAN5-52808-308, NASA solicited proposals to participate in a design assessment and to make recommendations regarding the future development of low cost Earth observing satellites based on commercial or flight proven design derivatives.

- For agreement NCCW-34, NASA accepted an unsolicited proposal to transfer aerospace developed superplastic forming technology to the automotive industry to produce lightweight aluminum components that have competitive costs and steel parts.

Express Knowledge

- The intent of CAN-OA-94-1 was to stimulate broad public use, via the Internet, of the very large remote sensing databases maintained by NASA and other agencies to stimulate U.S. economic growth, improve the quality of life, and contribute to the implementation of a National Information Infrastructure.

- For agreement NCCW-43, NASA accepted an unsolicited proposal to cooperatively support the development of an environmental resource center in Texas along with the Texas Department of Commerce to provide environmental data services, based on remotely sensed data.

Development of NASA's Resource Sharing Policy

In January 1994, MSFC requested a deviation from existing NASA policy to allow the award of a cooperative agreement (NCC8-33) to a large commercial firm. MSFC stated that they expected cost sharing by the recipient. Headquarters approved the deviation in February 1994, and provided a draft generic cooperative agreement that could be tailored to meet the specific situation. NASA negotiated the agreement with a 52 percent recipient and 48 percent Government share ratio.

Later in March 1994, MSFC requested another deviation to award cooperative agreements to for-profit firms under NASA Research Announcements (NRA) 8-11 and 8-12. Code H approved the request in April 1994, and said that 30 percent is a reasonable recipient contribution. They also permitted tailoring the February 1994 generic cooperative agreement. In June 1994, the Associate Administrator for Procurement issued a class deviation to the Handbook stating that a recipient's resource share should be at least 50 percent.

Draft guidance issued in October 1994, by the Associate Administrator for Procurement, stipulated that a substantial contribution on the part of the recipient is a critical aspect of [the] cooperative agreement policy and its appropriate implementation. Normally, the recipient is expected to contribute 50 percent of the total resources required to accomplish the agreement. A major type of recipient contribution to the agreement is cash or cash equivalent resources to be expended. NASA's contribution to an agreement may take a variety of forms; personnel, test facilities, laboratory facilities, and cash are all acceptable contributions. All contributions other than cash should be fully burdened to reflect the true cost of the contribution. Further, all Government contributions should be considered part of the NASA share of the resources committed to the agreement.

NASA resource sharing policy remained basically unchanged between October 1994 and the 1996 guidance (see Appendix IV).

Legislation or Program	NASA Headquarters Policy		Procurement Instrument Example
	Date	Event	
National Aeronautics and Space Act of 1958, P.L. 85-568, 72 Stat 426	July 1958	Basic Authority for Use of CA's	
Federal Grant and Cooperative Agreement Act of 1977, originally at 41 U.S.C. 501 et seq., as P.L. 95-224, moved to 31 U.S.C. 6301 et seq. and dubbed the **Chiles Act**, 31 U.S.C. 6301 et seq., as P.L. 97-258	Spring 1981 September 1982 October 1983	Guidelines Established, NHB 5800.1 Introduce Use of CA's Under Expanded Criteria Guidelines Published, NHB 5800.1B	
National Performance Review Technology Reinvestment Project (TRP) Aerospace Industry Technology Program (AITP) Access to Space Study	September 1993 December 1993 January 1994 February 1994 March 1994 May 1994 June 1994	Deviation Approved for Award to For-Profit Firm Guidelines Revised, NHB 5800.1C Deviation of FAR 31.205-18 to Allow Recipients' Independent Research and Development (IR&D) Costs as Recoverable Interim Rule to Allow Recipient's IR&D as Recoverable Class Deviation to NASA Guidelines for Using CA With Profit-Making Firms	First NASA Award of CA to For-Profit Company Advanced Research Projects Agency (ARPA) Selections are Transferred to NASA for Administration NRA 8-11, “Advanced Propulsion Technologies,” and NRA 8-12, “Advanced Structures and TPS Technologies” DC-XA (Unsolicited Proposal) Draft Guidance/Sample CA CAN OA-94-1, “Public Use of Earth and Space Science Data Over the Internet" CAN OACT-94-1, "Industry-Led Research & Development Projects”
National Space Transportation Policy	August 1994 October 1994 January 1995	Approval for Award to For-Profit Firms Without Any Resource Sharing	 Draft Guidance/Sample CA CAN 8-1 and 8-2 (X-33 Phase I)
National Performance Review, NASA Recommendations and Actions	June 1995 March 1996 April 1996 July 1996 May 1997	Proposed Rules For Use With Commercial Firms Final CA Rules Published in Federal Register Guidelines Published as Codified in 14 C.F.R. 1274 FAR Revised re: IR&D	 CAN 8-3 (X-33 Phase II) and CAN 8-4, “Highly Reusable Space Transportation” CAN 5-5208-308, “Assessment of Derivatives of Satellites for Earth Observing Missions”

Figure 8 - Chronology of Use of Cooperative Agreements (CA's)

Scope We reviewed all agreements at GSFC, LeRC, LaRC, and NASA Headquarters, and 23 at MSFC. The initial estimated value of the cooperative agreements reviewed was $1.875 billion. Planned resource sharing by recipients totaled $656 million and by NASA was $1.219 billion. About 30 percent, or 21, of the cooperative agreements entered into were with consortia comprised primarily of for-profit firms. These recipients had prepared formal Articles of Collaboration. Another 30 percent, or 20, were awarded to recipients who had formed teaming or partnering arrangements with other organizations. The use of formal written teaming/partnering arrangements varied. The remaining 40 percent, or 27, agreements were entered into with a single commercial firm. See Appendix III, Charts 1 and 3, for specific information on each cooperative agreement in our sample.

Sixty-one, or 90 percent, of the cooperative agreements reviewed derived from competitive sources, specifically, Cooperative Agreement Notice (CAN) (40), NASA Research Announcement (NRA) (10), the TRP (9), and other competitive solicitations (2). Seven, or 10 percent, were noncompetitive or unsolicited proposals (UP). Figure 9 displays the source relationship of the agreements.

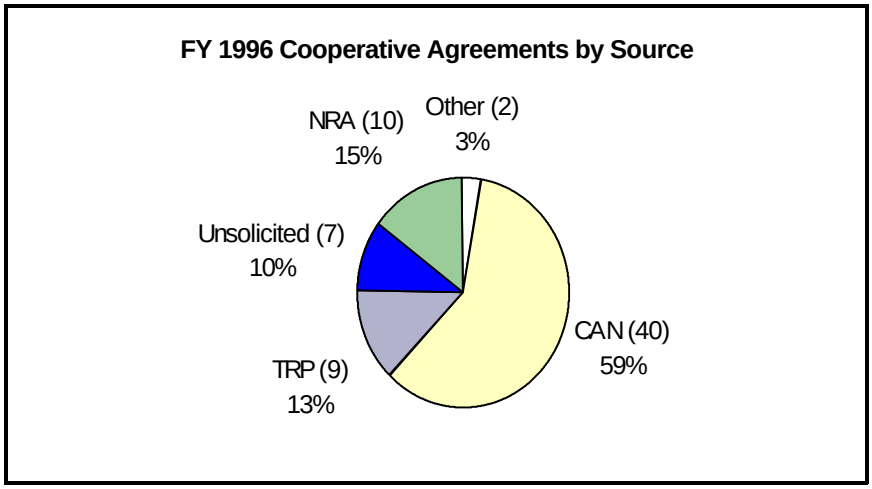


Figure 9 - Relationship of Cooperative Agreements to Source

Data Sources The statistical presentations in this report were prepared from data obtained from the Office of Procurement, Program Operations Division (Code HS).[15] We obtained additional data about new technology reporting from Center commercial technology offices and the Technology Tracking System (TechTracS) at Headquarters. Also, we obtained data from NASA's Center for Aerospace Information (CASI) to validate the success of reporting requirements to that institution. Elsewhere in this report we discuss difficulties experienced with validating data.

Field Work The review team completed field work between January 1997, and May 1997. Field work included a review of: cooperative agreement policies, procedures and guidelines; the official cooperative agreement files; procurement management survey reports; and interviews with contracting officers (CO), their staff, and COTR's. For review purposes, a CO is a contracting, agreement, or grants officer. A COTR, technical monitor (TM), or technical officer, are considered the same.

Industry Questionnaires We solicited information from industry partners by customized questionnaire (see Appendix VI). See section "Industry Participation" for highlights of the responses received.

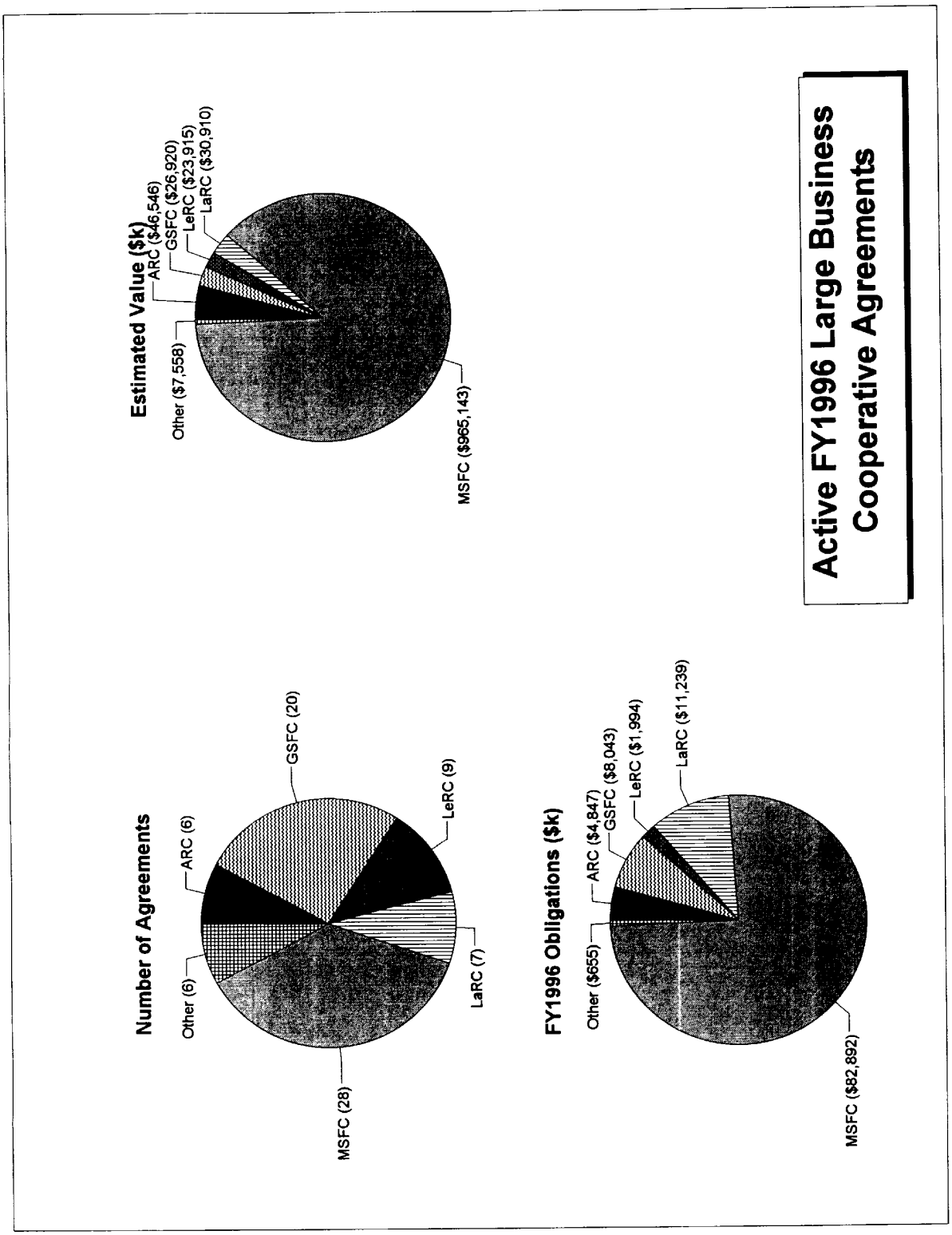
[15] NCC5-100 was originally awarded by GSFC, but later transferred to ARC for administration where it is considered for data collection purposes.

Appendix III - Chart 1

FISCAL YEAR 1996
ACTIVE AWARDS
COOPERATIVE AGREEMENTS ONLY
Large Businesses - All Centers

Agreement Number	File Reviewed	Question-naire Sent	Issuing Center	Business Type	Competition	Award Date	Completion Date	Estimated FY96 Obs ($k)	Estimated Value ($k)	Recipient Name	Type of Effort	Agreement Description
NCC 2 9000	Y	Y	ARC	LARGE BUS	COMPETED	05/16/1994	06/30/1997	1,011	22,846	INTERNATIONAL BUSINESS MACHINES	R/D	HIGH PERFORMANCE COMPUTING AND COMMUNICATIONS
NCC 2 9002	Y	Y	ARC	LARGE BUS	COMPETED	07/29/1994	12/29/1996	0	11,129	BOEING CO	R/D	WEARABLE COMPUTER SYSTEMS WITH HEADMOUNTED
NCC 2 9003	Y	Y	ARC	LARGE BUS	COMPETED	06/03/1994	11/15/1995	400	1,650	ROCKWELL INTERNATIONAL CORP	R/D	LIGHT WEIGHT THERMAL PROTECTION SYSTEM
NCC 2 9006	Y	Y	ARC	LARGE BUS	COMPETED	09/01/1994	08/31/1997	1,036	3,000	LOCKHEED MARTIN CORP	R/D	BAY AERA DIGITAL GEORESOURCE (BADGER) GEOGRAPHIC
NCC 2 9007	Y	Y	ARC	LARGE BUS	COMPETED	02/01/1995	03/31/1997	0	4,316	LEICA INC	R/D	COMPUTER AIDED EARTH MOVING
NCC 5 100	Y	Y	ARC	LARGE BUS	COMPETED	08/09/1994	07/30/1999	2,400	7,950	B D M FEDERAL INC	SERVICES	DEVELOP & IMPLEMENT THE REMOTE SENSING PUBLIC
NCC 5 101	Y	Y	GSFC	LARGE BUS	COMPETED	01/09/1995	02/22/1997	770	2,076	INTERNATIONAL BUSINESS MACHINES	SERVICES	RETRIEVAL OF DIGITAL IMAGES
NCC 5 102	Y	Y	GSFC	LARGE BUS	COMPETED	12/28/1994	11/30/1997	665	2,251	BELL COMMUNICATIONS RESEARCH	SERVICES	USABILITY & INTEROPERABILITY: A DUAL STRATEGY
NCC 5 103	Y	Y	GSFC	LARGE BUS	COMPETED	09/06/1994	09/06/1997	317	900	SCIENCE APPLICATION INTL CORP	SERVICES	SAIC & COOPERATING SCHOOLS ARE ATTEMPTING TO
NCC 5 104	Y	Y	GSFC	LARGE BUS	COMPETED	09/09/1994	07/31/1997	82	223	ANALYTIC SCIENCES CORP	SERVICES	ENCHANCING THE TEACHING OF SCIENCE IN ELEMENTARY
NCC 5 106	Y	Y	GSFC	LARGE BUS	COMPETED	12/14/1994	12/14/1997	236	662	COMPUTER SCIENCES CORP	SERVICES	PUBLIC USE OF EARTH & SPACE SCIENCE DATA OVER THE INTERNET
NCC 5 109	Y	Y	GSFC	LARGE BUS	COMPETED	12/19/1994	08/30/1997	907	2,306	W R C TELEVISION	SERVICES	PUBLIC ACCESS TO EARTH & SPACE SCIENCE DATA VIA
NCC 5 112	Y	Y	GSFC	LARGE BUS	COMPETED	02/07/1995	02/06/1998	146	603	LOCKHEED MARTIN AEROSPACE CORP	SERVICES	SAIRE A SCABLE AGENT-BASED INFO RETRIEVAL ENGINE
NCC 5 117	Y	Y	GSFC	LARGE BUS	COMPETED	02/01/1995	11/01/1996	0	2,047	LOCKHEED MARTIN CORP	R/D	LOW COST CRYOCOOLERS FOR HIGH TEMPERATURE
NCC 5 118	Y	Y	GSFC	LARGE BUS	COMPETED	11/13/1995	09/30/1998	470	702	LOCKHEED MARTIN CORP	R/D	YOHKOH PUBLIC OUTREACH
NCC 5 135	Y	Y	GSFC	LARGE BUS	COMPETED	06/28/1996	06/28/1999	2,500	13,200	CRAY RESEARCH INC	EQUIP/SUPP	COOPERATIVE AGREEMENT FOR CONTINUOUSLY AVAILABLE
NCC 5 136	Y	Y	GSFC	LARGE BUS	COMPETED	05/23/1996	11/21/1996	200	200	LOCKHEED MARTIN CORP	R/D	NEXT GENERATION SPACE TELESCOPE FEASIBILITY
NCC 5 137	Y	N	GSFC	LARGE BUS	COMPETED	05/24/1996	11/21/1996	200	200	T R W INC	R/D	NEXT GENERATION SPACE TELESCOPE FEASIBILITY
NCC 5 142	Y	N	GSFC	LARGE BUS	NONCOMP	06/26/1996	03/31/1997	250	250	LITTON SYSTEMS INC	R/D	APPLIED RESEARCH & DEVELOPMENT OF HEMISPHERICAL
NCC 5 155	Y	Y	GSFC	LARGE BUS	COMPETED	08/16/1996	12/13/1996	200	200	BALL AEROSPACE & TECH CORP	R/D	FEASIBILITY ASSESSMENT FOR DEVELOPING LOW COST
NCC 5 156	Y	Y	GSFC	LARGE BUS	COMPETED	08/13/1996	12/13/1996	100	100	C T A INC	R/D	FEASIBILITY ASSESSMENT FOR DEVELOPING LOW COST
NCC 5 157	Y	Y	GSFC	LARGE BUS	COMPETED	08/13/1996	12/13/1996	200	200	HUGHES AIRCRAFT CO	R/D	FEASIBILITY ASSESSMENT FOR DEVELOPING LOW COST
NCC 5 158	Y	Y	GSFC	LARGE BUS	COMPETED	08/13/1996	12/13/1996	200	200	LOCKHEED MARTIN CORP	R/D	FEASIBILITY ASSESSMENT FOR DEVELOPING LOW COST
NCC 5 159	Y	Y	GSFC	LARGE BUS	COMPETED	08/13/1996	12/13/1996	200	200	SPACE SYSTEMS LORAL INC	R/D	FEASIBILITY ASSESSMENT FOR DEVELOPMENT HOW COST
NCC 5 160	Y	Y	GSFC	LARGE BUS	COMPETED	08/12/1996	12/13/1996	200	200	ORBITAL SCIENCES CORP	R/D	FEASIBILITY ASSESSMENT FOR DEVELOPING LOW COST
NCC 5 162	Y	Y	GSFC	LARGE BUS	COMPETED	08/14/1996	12/13/1996	200	200	T R W INC	R/D	FEASIBILTY ASSESSMENT FOR DEVELOPING LOW COST
NCCW 34	Y	Y	HDQTR	LARGE BUS	NONCOMP	05/24/1994	11/30/1995	300	1,278	GENERAL MOTORS CORP	R/D	GENERAL MOTORS CORP.; SPITFIRE-I
NCCW 43	Y	Y	HDQTR	LARGE BUS	NONCOMP	04/25/1994	04/23/1996	0	715	LOCKWOOD ANDREWS & NEWNAM INC	R/D	ENVIRONMENTAL RESOURCE CENTER
NCCW 77	Y	Y	HDQTR	LARGE BUS	COMPETED	09/18/1995	09/14/1997	0	3,118	SHIPLEY CO	R/D	LOW COST, HIGH DENSITY, SEQUENTIAL BUILD PWB MFG
NCC10 18	N	N	KSC	LARGE BUS	COMPETED	03/05/1996	03/06/1997	100	100	AIR PRODUCTS & CHEMICALS INC	R/D	JOINT DEVELOPMENT OF A TWO-PHASE UNIVERSAL FLOW
NCC 1 191	Y	Y	LARC	LARGE BUS	COMPETED	07/13/1994	12/15/1996	1,707	4,474	MCDONNELL DOUGLAS CORP	R/D	TA2 GRAPHITE COMPOSITE PRIMARY STRUCTURES
NCC 1 192	Y	Y	LARC	LARGE BUS	COMPETED	06/28/1994	12/31/1996	3,108	4,730	MCDONNELL DOUGLAS CORP	R/D	TA3 LIGHTWEIGHT DURABLE THERMAL PROTECTION SYSTEM
NCC 1 193	Y	Y	LARC	LARGE BUS	COMPETED	07/11/1994	11/04/1996	2,149	4,988	ROCKWELL INTERNATIONAL CORP	R/D	TA2 GRAPHITE COMPOSITE PRIMARY STRUCTURE
NCC 1 196	Y	Y	LARC	LARGE BUS	COMPETED	07/21/1994	07/30/1999	4,100	6,744	T R W INC	R/D	PASSIVE MILLIMETER WAVE CAMERA
NCC 1 199	Y	Y	LARC	LARGE BUS	COMPETED	08/22/1994	08/21/1996	0	7,774	LEAR ASTRONICS CORP	R/D	AUTONOMOUS LANDING GUIDANCE
NCC 1 202	Y	Y	LARC	LARGE BUS	COMPETED	10/18/1994	10/17/1997	175	500	MACNEAL SCHWENDLER CORP	R/D	COMMERCIALIZATION OF NASA INTERFACE TECHNOLOGY
NCC 1 203	Y	Y	LARC	LARGE BUS	COMPETED	02/15/1995	02/15/1997	0	1,700	THERMOTREX CORP	R/D	MILLIMETER WAVE ULTRA-COMPACT IMAGING TECHNOLOGY
NCC 3 345	Y	Y	LERC	LARGE BUS	COMPETED	06/22/1994	03/21/1997	0	2,355	SPACE SYSTEMS LORAL INC	R/D	BEAN-AGLIL ACTIVE TRANSMIT PHASED ARRAY (ATPA)
NCC 3 349	Y	Y	LERC	LARGE BUS	COMPETED	02/09/1995	02/09/1997	27	2,986	LOCKHEED MARTIN CORP	R/D	HIGH CAPACITY SOLID POLYMER BATTERY DEVELOPMENT
NCC 3 356	Y	Y	LERC	LARGE BUS	COMPETED	08/12/1994	08/12/1996	0	882	MCDONNELL DOUGLAS HELICOPTER	R/D	FACE GEAR TECHNOLOGY PROGRAM
NCC 3 359	Y	Y	LERC	LARGE BUS	COMPETED	08/17/1994	12/17/1999	0	60	T R W INC	R/D	DIANA LUNAR & COMET RENDEZVOUS (DIANA) RESPONSE
NCC 3 379	Y	Y	LERC	LARGE BUS	COMPETED	02/10/1995	02/10/1997	0	2,000	GRUMMAN AEROSPACE CORP	R/D	ADAPTIVE & IMPROVED PASSIVE ACOUSTIC SUPPRESSION
NCC 3 386	Y	Y	LERC	LARGE BUS	COMPETED	03/03/1995	03/02/1997	0	1,804	NEAR NET SHAPE CASTING CONSORTIUM	R/D	PRECISION CASTING VIA ADVANCED SIMULATION
NCC 3 387	Y	Y	LERC	LARGE BUS	COMPETED	03/20/1995	06/19/1997	0	1,963	ALLISON ENGINE CO	R/D	ADVANCED MATERIALS FOR SMALL TURBINE ENGINES
NCC 3 413	Y	Y	LERC	LARGE BUS	COMPETED	05/31/1995	11/15/1997	1,967	8,406	UNITED TECHNOLOGIES CORP	R/D	AFFORDABLE HIGH PERFORMANCE COMPUTING PROJECT
NCC 3 426	Y	Y	LERC	LARGE BUS	COMPETED	09/21/1995	09/20/1997	0	3,455	SPACE SYSTEMS LORAL INC	R/D	EHF ACTIVE TRANSMIT PHASED ARRAY, BEAM AILE
NCC 8 30	Y	Y	MSFC	SMALL BUS	COMPETED	04/06/1994	04/05/1999	6,658	20,686	AMERICAN ROCKET/LOCKHEED MARTIN	R/D	HYBRID TECHNOLOGY OPTION PROJECT
NCC 8 33	Y	N	MSFC	LARGE BUS	NONCOMP	06/03/1994	11/30/1995	-1,469	1,631	UNITED TECHNOLOGIES CORP	R/D	TRIPROPELLANT READINESS EVALUATION PROGRAM
NCC 8 35	Y	Y	MSFC	LARGE BUS	COMPETED	07/18/1994	08/30/1996	7,467	18,305	MCDONNELL DOUGLAS CORP	R/D	ALV CONCEPTS
NCC 8 39	Y	Y	MSFC	LARGE BUS	NONCOMP	06/22/1994	01/17/1997	1,474	4,305	ROCKWELL INTERNATIONAL CORP	R/D	REUSABLE CRYOGENIC PROPELLANT TANK SYSTEMS
NCC 8 40	Y	Y	MSFC	LARGE BUS	COMPETED	07/11/1994	11/01/1996	1,774	9,817	MCDONNELL DOUGLAS CORP	R/D	REUSEABLE CRYOGENIC TANK
NCC 8 41	N	N	MSFC	LARGE BUS	COMPETED	06/03/1994	09/30/1996	288	4,718	MCDONNELL DOUGLAS CORP	R/D	SUBSCALE MAIN PROPULSION SYSTEM SUBSYSTEM
NCC 8 42	N	N	MSFC	LARGE BUS	COMPETED	10/26/1994	10/31/1995	0	335	ALLIEDSIGNAL INC	R/D	TA3-CATALYST IGNITER DIVELOPMENT
NCC 8 43	Y	Y	MSFC	LARGE BUS	NONCOMP	05/31/1994	04/30/1996	0	454	LOCKHEED MARTIN CORP	R/D	ADVANCED PROPULSION TECHNOLOGIES
NCC 8 44	N	N	MSFC	LARGE BUS	COMPETED	09/27/1994	10/01/1996	4,382	11,379	AEROJET GENERAL CORP	R/D	TRIPROPELLENT ACD ENGINE OXIDIZER RICH PARTS
NCC 8 45	Y	Y	MSFC	LARGE BUS	COMPETED	08/12/1994	02/14/1997	7,912	15,138	ROCKWELL INTERNATIONAL CORP	R/D	ENGINE TECHNOLOGY DEVELOPMENT AND DEMONSTRATION
NCC 8 47	N	N	MSFC	LARGE BUS	COMPETED	07/22/1994	09/30/1996	1,913	3,282	ROCKWELL INTERNATIONAL CORP	R/D	SUBSCALE PROPULSION SYSTEM DEMONSTRATORS
NCC 8 50	Y	Y	MSFC	LARGE BUS	COMPETED	10/03/1994	06/01/1996	1,082	1,022	ROCKWELL INTERNATIONAL CORP	R/D	RUSSIAN TECH AND HARDWARE
NCC 8 60	Y	Y	MSFC	LARGE BUS	NONCOMP	01/31/1995	02/15/1997	0	4,025	UNITED TECHNOLOGIES CORP	R/D	DUAL-USC HYDROSTATIC BEARING PROGRAM
NCC 8 61	Y	Y	MSFC	LARGE BUS	COMPETED	05/05/1995	09/23/1997	0	1,106	MCDONNELL DOUGLAS CORP	R/D	SOLAR THERMAL UPPER STAGE TECHNOLOGY DEMONSTRATOR
NCC 8 62	Y	Y	MSFC	LARGE BUS	COMPETED	01/10/1995	03/31/1998	0	1,928	ROCKWELL INTERNATIONAL CORP	R/D	COMPUTATIONAL AEROACOUSTIC ANALYSIS SYSTEM
NCC 8 63	Y	N	MSFC	LARGE BUS	COMPETED	04/04/1995	02/19/1998	0	1,400	ALLIEDSIGNAL INC	R/D	STRUCTURAL CERAMICS FOR ADVANCED TURBOMACHINERY
NCC 8 72	Y	Y	MSFC	LARGE BUS	COMPETED	03/24/1995	06/30/1996	1,097	6,290	MCDONNELL DOUGLAS CORP	R/D	X-33 ADVANCED TECHNOLOGY DEMONSTRATOR CONCEPT
NCC 8 73	Y	Y	MSFC	LARGE BUS	COMPETED	03/24/1995	06/30/1996	1,703	6,857	LOCKHEED MARTIN CORP	R/D	X-33 ADVANCED TECHNOLOGY DEMONSTRATOR STUDY
NCC 8 74	Y	Y	MSFC	LARGE BUS	COMPETED	03/24/1995	06/30/1996	1,529	6,354	ROCKWELL INTERNATIONAL CORP	R/D	X-33 ADVANCED TECHNOLOGY DEMONSTRATOR CONCEPT
NCC 8 75	Y	Y	MSFC	LARGE BUS	COMPETED	03/30/1995	09/30/1999	-3,000	8,110	ORBITAL SCIENCES CORP	R/D	X-34
NCC 8 76	Y	N	MSFC	LARGE BUS	COMPETED	05/15/1995	10/31/1996	241	7,103	LOCKHEED ADVANCED DEV CO	R/D	AEROSPIKE ENGINE DEMONSTRATION
NCC 8 77	Y	Y	MSFC	LARGE BUS	COMPETED	05/01/1995	08/01/1996	2,094	4,791	MCDONNELL DOUGLAS CORP	R/D	X-33 ADVANCED TECHNOLOGY DEMONSTRATION
NCC 8 78	Y	Y	MSFC	LARGE BUS	COMPETED	05/18/1995	06/30/1996	5,516	15,297	LOCKHEED ADVANCED DEV CO	R/D	AREA 4 TECHNOLOGY DEMONSTRATIONS
NCC 8 79	N	N	MSFC	LARGE BUS	COMPETED	05/03/1995	07/31/1996	1,253	5,093	ROCKWELL INTERNATIONAL CORP	R/D	X-33 ADVANCED TECHNOLOGY DEMONSTRIATOR
NCC 8 81	Y	N	MSFC	LARGE BUS	NONCOMP	07/31/1995	04/30/1997	132	531	LOCKHEED MARTIN CORP	R/D	PROPELLANT TANK TEST
NCC 8 102	Y	Y	MSFC	LARGE BUS	COMPETED	09/19/1996	09/30/1997	30	30	ROCKWELL INTERNATIONAL CORP	R/D	HIGHLY REUSABLE SPACE TRANSPORTATION END TO END
NCC 8 113	Y	Y	MSFC	LARGE BUS	COMPETED	09/05/1996	09/30/1997	30	30	ROCKWELL INTERNATIONAL CORP	R/D	RESEARCH ENTITLED "HIGHLY REUSABLE SPACE
NCC 8 115	Y	Y	MSFC	LARGE BUS	COMPETED	07/02/1996	12/31/2000	40,786	40,786	LOCKHEED MARTIN CORP	R/D	R/S X-33 PHASE II, DESIGN AND DEVELOPMENT
NCC 7 4	N	N	NMO	LARGE BUS	COMPETED	06/09/1995	06/09/1997	0	1,847	POLAROID CORP	R/D	TO PROVIDE A COMPACT UV SOURCE FOR COMMERCIAL
NCC13 13	N	N	SSC	LARGE BUS	COMPETED	06/23/1995	06/22/1999	255	500	T A S C INC	SERVICES	USER UNSTALLABLE AIRBORNE IMAGERY COLLECTION

Code HS Data as of 9/30/96


Active FY1996 Large Business Cooperative Agreements
Estimated Value ($k)
ARC ($46,546)
GSFC ($26,920)
LeRC ($23,915)
LaRC ($30,910)
Other ($7,558)
MSFC ($965,143)
Number of Agreements
ARC (6)
GSFC (20)
LeRC (9)
Other (6)
LaRC (7)
MSFC (28)
FY1996 Obligations ($k)
ARC ($4,847)
GSFC ($8,043)
LeRC ($1,994)
LaRC ($11,239)
Other ($655)
MSFC ($82,892)

APPENDIX III - STATISTICAL CHARTS

FY1996 ACTIVE COOPERATIVE AGREEMENTS WITH LARGE COMMERCIAL FIRMS													
									RESOURCE SHARING				
	Sent			Consort/	NTR	Property	CASI		Recipient ($k)		NASA/Govt. ($k)		Total CA
Agreement	Quest.	Recipient	Source	Team	Ref.	Ref.	Ref.	Effort	%	SubTotal	%	Subtotal	Program
NCC 5 135	Y	CRAY RESEARCH INC	CAN 21425/041	n/a	Y	N	Y	Equip/Supp	.56	$16,650	.44	$13,200	$29,850
NCC 5 155	Y	BALL AEROSPACE & TECH CORP	CAN 5-52808-308	n/a	N	N	N	R&D	.50	$200	.50	$200	$400
NCC 5 156	Y	C T A INC	CAN 5-52808-308	n/a	N	N	N	R&D	.50	$100	.50	$100	$200
NCC 5 157	Y	HUGHES AIRCRAFT CO	CAN 5-52808-308	n/a	N	N	N	R&D	.50	$200	.50	$200	$400
NCC 5 158	Y	LOCKHEED MARTIN CORP	CAN 5-52808-308	n/a	N	N	N	R&D	.50	$200	.50	$200	$400
NCC 5 160	Y	ORBITAL SCIENCES CORP	CAN 5-52808-308	n/a	N	N	N	R&D	.50	$200	.50	$200	$400
NCC 5 159	Y	SPACE SYSTEMS LORAL INC	CAN 5-52808-308	n/a	N	N	N	R&D	.57	$261	.43	$200	$461
NCC 5 162	Y	T R W INC	CAN 5-52808-308	n/a	N	N	N	R&D	.57	$260	.43	$200	$460
NCC 5 136	Y	LOCKHEED MARTIN CORP	CAN 52911/361	T	Y	N	N	R&D	.50	$200	.50	$200	$400
NCC 5 137	N	T R W INC	CAN 52911/361	T	Y	N	N	R&D	.50	$200	.50	$200	$400
NCC 8 78	Y	LOCKHEED ADVANCED DEV CO	CAN 8-1	T	Y	Y	Y	R&D	.39	$5,505	.61	$8,435	$13,940
NCC 8 73	Y	LOCKHEED MARTIN CORP	CAN 8-1	T	Y	Y	Y	R&D	.64	$12,143	.36	$6,857	$19,000
NCC 8 72	Y	MCDONNELL DOUGLAS CORP	CAN 8-1	T	Y	Y	Y	R&D	.64	$11,250	.36	$6,290	$17,540
NCC 8 77	Y	MCDONNELL DOUGLAS CORP	CAN 8-1	n/a	Y	Y	Y	R&D	.33	$1,910	.67	$3,838	$5,748
NCC 8 74	Y	ROCKWELL INTERNATIONAL CORP	CAN 8-1	T	Y	Y	Y	R&D	.64	$11,540	.36	$6,559	$18,099
NCC 8 75	Y	ORBITAL SCIENCES CORP	CAN 8-2	T	Y	Y	Y	R&D	.59	$99,763	.41	$70,000	$169,763
NCC 8 115	Y	LOCKHEED MARTIN CORP	CAN 8-3	T	Y	Y	Y	R&D	.19	$211,599	.81	$912,390	$1,123,989
NCC 8 102	Y	ROCKWELL INTERNATIONAL CORP	CAN 8-4	n/a	Y	Y	Y	R&D	.50	$100	.50	$100	$200
NCC 8 113	Y	ROCKWELL INTERNATIONAL CORP	CAN 8-4	n/a	Y	Y	Y	R&D	.50	$100	.50	$100	$200
NCC 3 359	Y	T R W INC	CAN AO-94-055-03	T	N	N	Y	R&D	.77	$200	.23	$60	$260
NCC 3 413	Y	UNITED TECHNOLOGIES CORP	CAN LeRC-95-1	T	Y	Y	Y	R&D	.52	$4,407	.48	$4,000	$8,407
NCC 5 104	Y	ANALYTIC SCIENCES CORP	CAN OA-94-1	n/a	Y	Y	Y	Services	.50	$227	.50	$223	$450
NCC 5 100	Y	BDM FEDERAL INC	CAN OA-94-1	C	Y	Y	Y	Services	.00	$0	1.00	$7,950	$7,950
NCC 5 102	Y	BELL COMMUNICATIONS RESEARCH	CAN OA-94-1	C	Y	Y	Y	Services	.46	$1,926	.54	$2,251	$4,177
NCC 5 108	Y	COMPUTER SCIENCES CORP	CAN OA-94-1	n/a	Y	Y	Y	Services	.51	$681	.49	$662	$1,343
NCC 5 101	Y	INTERNATIONAL BUSINESS MACHINES	CAN OA-94-1	n/a	Y	Y	Y	Services	.51	$2,161	.49	$2,076	$4,237
NCC 5 112	Y	LOCKHEED MARTIN AEROSPACE CORP	CAN OA-94-1	C	Y	Y	Y	Services	.00	$0	1.00	$603	$603
NCC 2 9006	Y	LOCKHEED MARTIN CORP	CAN OA-94-1	C	Y	Y	Y	R&D	.38	$1,870	.62	$3,000	$4,870
NCC 5 118	Y	LOCKHEED MARTIN CORP	CAN OA-94-1	T	Y	Y	Y	R&D	.00	$0	1.00	$702	$702
NCC 5 103	Y	SCIENCE APPLICATION INTL CORP	CAN OA-94-1	C	Y	Y	Y	Services	.00	$0	1.00	$900	$900
NCC 5 109	Y	W R C TELEVISION	CAN OA-94-1	C	Y	Y	Y	Services	.73	$6,104	.27	$2,306	$8,410
NCC 8 63	N	ALLIEDSIGNAL INC	CAN OACT-94-1	C	Y	Y	Y	R&D	.57	$1,829	.43	$1,400	$3,229
NCC 3 387	Y	ALLISON ENGINE CO	CAN OACT-94-1	C	Y	Y	Y	R&D	.72	$5,140	.28	$1,963	$7,103
NCC 3 379	Y	GRUMMAN AEROSPACE CORP	CAN OACT-94-1	T	Y	Y	Y	R&D	.50	$1,000	.50	$1,000	$2,000
NCC 5 117	Y	LOCKHEED MARTIN CORP	CAN OACT-94-1	C	Y	Y	Y	R&D	.51	$2,098	.49	$2,047	$4,145
NCC 8 61	Y	MCDONNELL DOUGLAS CORP	CAN OACT-94-1	C	Y	Y	Y	R&D	.54	$1,318	.46	$1,108	$2,426
NCC 3 386	Y	NEAR NET SHAPE CASTING CONSORT	CAN OACT-94-1	C	Y	Y	Y	R&D	.55	$2,227	.45	$1,804	$4,031
NCC 8 62	Y	ROCKWELL INTERNATIONAL CORP	CAN OACT-94-1	C	Y	Y	Y	R&D	.53	$2,194	.47	$1,928	$4,122
NCC 3 426	Y	SPACE SYSTEMS LORAL INC	CAN OACT-94-1	T	Y	Y	Y	R&D	.67	$2,318	.33	$1,137	$3,455
NCC 1 203	Y	THERMOTREX CORP	CAN OACT-94-1	C	Y	Y	Y	R&D	.55	$2,114	.45	$1,700	$3,814
NCC 2 9000	Y	INTERNATIONAL BUSINESS MACHINES	CRA 2-33504 (BDP)	C	Y	Y	Y	R&D	.30	$9,833	.70	$22,943	$32,776
NCC 8 76	N	LOCKHEED ADVANCED DEV CO	NRA 8-11	T	Y	Y	Y	R&D	.32	$3,235	.68	$6,862	$10,097
NCC 8 43	N	LOCKHEED MARTIN CORP	NRA 8-11	n/a	Y	Y	Y	R&D	.53	$511	.47	$454	$965
NCC 8 45	Y	ROCKWELL INTERNATIONAL CORP	NRA 8-11	n/a	Y	Y	Y	R&D	.83	$117,185	.17	$23,310	$140,495
NCC 8 50	Y	ROCKWELL INTERNATIONAL CORP	NRA 8-11	n/a	Y	Y	Y	R&D	.76	$7,516	.24	$2,412	$9,928
NCC 1 191	Y	MCDONNELL DOUGLAS CORP	NRA 8-12	T	Y	Y	Y	R&D	.66	$8,637	.34	$4,474	$13,111
NCC 1 192	Y	MCDONNELL DOUGLAS CORP	NRA 8-12	T	Y	Y	Y	R&D	.17	$1,011	.83	$4,836	$5,847
NCC 8 40	Y	MCDONNELL DOUGLAS CORP	NRA 8-12	n/a	Y	Y	Y	R&D	.45	$8,503	.55	$10,393	$18,896
NCC 1 193	Y	ROCKWELL INTERNATIONAL CORP	NRA 8-12	T	Y	Y	Y	R&D	.56	$6,076	.44	$4,756	$10,832
NCC 2 9003	Y	ROCKWELL INTERNATIONAL CORP	NRA 8-12	n/a	Y	Y	Y	R&D	.55	$2,520	.45	$2,051	$4,571
NCC 8 39	Y	ROCKWELL INTERNATIONAL CORP	NRA 8-12	n/a	Y	Y	Y	R&D	.49	$4,072	.51	$4,305	$8,377
NCC 1 202	Y	MACNEAL SCHWENDLER CORP	SOL	n/a	Y	Y	Y	R&D	.50	$610	.50	$610	$1,220
NCC 2 9002	Y	BOEING CO	TRP	C	Y	Y	Y	R&D	.65	$7,264	.35	$3,864	$11,128
NCC 1 199	Y	LEAR ASTRONICS CORP	TRP	n/a	N	N	N	R&D	.50	$7,774	.50	$7,774	$15,548
NCC 2 9007	Y	LEICA INC	TRP	C	Y	Y	N	R&D	.77	$14,604	.23	$4,316	$18,920
NCC 3 349	Y	LOCKHEED MARTIN CORP	TRP	T	Y	Y	Y	R&D	.49	$1,750	.51	$1,852	$3,602
NCC 1 196	Y	T R W INC	TRP	C	Y	N	Y	R&D	.50	$2,644	.50	$2,644	$5,288
NCC 8 60	Y	UNITED TECHNOLOGIES CORP	TRP	C	Y	N	N	R&D	.50	$4,900	.50	$4,900	$9,800
NCC 8 30	Y	AMER ROCKET/LOCKHEED MARTIN	TRP SOL	n/a	N	N	N	R&D	.61	$16,294	.39	$10,391	$26,685
NCC 3 356	Y	MCDONNELL DOUGLAS HELICOPTER	TRP SOL-93-29	T	Y	Y	Y	R&D	.42	$632	.58	$882	$1,514
NCC 3 345	Y	SPACE SYSTEMS LORAL INC	TRP SOL-93-29	C	Y	Y	Y	R&D	.52	$1,105	.48	$1,017	$2,122
NCCW 34	Y	GENERAL MOTORS CORP	U/P	C	Y	Y	Y	R&D	.25	$319	.75	$958	$1,277
NCC 5 142	N	LITTON SYSTEMS INC	U/P	n/a	Y	N	N	R&D	.67	$500	.33	$250	$750
NCC 8 81	N	LOCKHEED MARTIN CORP	U/P	n/a	Y	Y	Y	R&D	.79	$3,902	.21	$1,039	$4,941
NCCW 43	Y	LOCKWOOD ANDREWS & NEWNAM INC	U/P	T	Y	Y	Y	R&D	.25	$179	.75	$536	$715
NCC 8 35	Y	MCDONNELL DOUGLAS CORP	U/P	n/a	Y	Y	Y	R&D	.30	$7,539	.70	$17,590	$25,129
NCCW 77	Y	SHIPLEY CO	U/P	C	Y	Y	Y	R&D	.53	$3,458	.47	$3,118	$6,576
NCC 8 33	N	UNITED TECHNOLOGIES CORP	U/P	n/a	Y	Y	Y	R&D	.52	$2,965	.48	$2,764	$5,729
		TOTALS (With NCC8-115)							.35	$655,733	.65	$1,219,590	$1,875,323
		TOTALS (Without NCC8-115)							.59	$444,134	.41	$307,200	$751,334

NASA Center for Aerospace Information (CASI)
Data As of March 31, 1997

	Number of Reports CASI		
Agreement Number	Should Have (a)	Has (b)	Basic CA at CASI (h)
NCC1-191 (c)	(d)	0	No
NCC1-192 (c)	(d)	0	No
NCC1-193	(d)	12	No
NCC1-196	2	0	No
NCC1-199 (c)	(e)	n/a	No
NCC1-202	(d)	0	No
NCC1-203	1	1	No
NCC2-9000	3	0	Yes
NCC2-9002	2	0	No
NCC2-9003 (c)	(d)	5	Yes
NCC2-9006	2	0	Yes
NCC2-9007	(e)	n/a	Yes
NCC3-345	2	0	No
NCC3-349	2	0	No
NCC3-356 (c)	2	0	Yes
NCC3-359	3	0	No
NCC3-379	2	0	No
NCC3-386	2	0	No
NCC3-387	2	1	No
NCC3-413	2	2	Yes
NCC3-426	1	0	No
NCC5-100	2	0	No
NCC5-101	2	0	No
NCC5-102	2	0	No
NCC5-103	2	0	No
NCC5-104	2	0	No
NCC5-108	2	0	No
NCC5-109	2	0	No
NCC5-112	2	0	No
NCC5-117	2	0	Yes
NCC5-118	1	0	No
NCC5-135	(e)	n/a	No
NCC5-136 (c)	(e)	n/a	No
NCC5-137 (c)	(e)	n/a	No
NCC5-142	(e)	n/a	No
NCC5-155	(e)	n/a	No
NCC5-156	(e)	n/a	No
NCC5-157	(e)	n/a	No
NCC5-158	(e)	n/a	No
NCC5-159	(e)	n/a	No
NCC5-160	(e)	n/a	No
NCC5-162	(e)	n/a	No
NCC8-30	(e)	n/a, but sent 1	No

NCC8-33 (c)	(d)	0	No
NCC8-35 (c)	(d)	4	No
NCC8-39	(d)	11	No
NCC8-40	(d)	0	No
NCC8-43	(d)	2	No
NCC8-45	(d)	0	No
NCC8-50	(d)	0	No
NCC8-60	(e)	n/a	No
NCC8-61	2	3	No
NCC8-62	2	0	No
NCC8-63	2	0	No
NCC8-72 (c)	(d)	1	No
NCC8-73 (c)	(d)	0	No
NCC8-74 (c)	(d)	9	No
NCC8-75	(d)	0	No
NCC8-76	1	0	No
NCC8-77	(d)	0	No
NCC8-78 (c)	(d)	0	No
NCC8-81	(d)	0	No
NCC8-102	(g)	0	No
NCC8-113	(g)	0	No
NCC8-115	(g)	0	No
NCCW-34 (c)	2	3 (f)	Yes
NCCW-43 (c)	(d)	0	Yes
NCCW-77	1	0	Yes

Notes:

(a) Includes a performance report for every year of the agreement and a summary of research in the final year. A performance report is due 60 days prior to the anniversary date of the agreement. A summary of research is due within 90 days after the expiration date of the agreement. Recipients send the reports to CASI. These requirements are contained in each agreement in §1274.921, "Publications and Reports: Non-Proprietary Research Results."

(b) Includes both performance reports and results of research found in scientific and technical publications.

(c) Agreement's completion date is prior to January 1, 1997, which means the recipient should have sent a summary of research to CASI by March 31, 1997.

(d) Agreement does not require annual performance reports and summaries of research. Recipients are only required to send technical reports to CASI.

(e) Agreement does not contain provisions of §1274.921.

(f) Only recipient with a completed agreement who sent a copy of the summary of research to CASI.

(g) Agreement has not been open 10 months as of March 31, 1997.

(h) §1274.207 of the Handbook requires CO's to send a copy of the basic agreement to CASI.

SECTION D

14 CFR PART 1274 -- COOPERATIVE AGREEMENTS WITH COMMERCIAL FIRMS

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1274.204 Evaluation and selection.
1274.205 Award procedures.
1274.206 Document format and numbering.
1274.207 Distribution of cooperative agreements.

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1274.302 Transfers, novations, and change of name agreements.

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Appendix A to Part 1274--Contract Provisions
Appendix B to Part 1274--Reports
Appendix C to Part 1274--Listing of Exhibits

Authority: 31 U.S.C. 6301 to 6308; 42 U.S.C. 2451, et seq.

General

§**1274.101 Purpose.**

(a) This Regulation establishes uniform administrative requirements for NASA cooperative agreements awarded to commercial firms. Cooperative agreements are ordinarily entered into with commercial firms to--

(1) support research and development,

(2) provide technology transfer from the Government to the recipient, or

(3) develop a capability among U.S. firms to potentially enhance U.S. competitiveness.

(b) An award may not be made to a foreign government. Award to foreign firms is not precluded. The approval of the Associate Administrator for Procurement is required to exclude foreign firms from submitting proposals.

§**1274.102 Definitions.**

Administrator. The Administrator or Deputy Administrator of NASA.

Associate Administrator for Procurement. The head of the Office of Procurement, NASA Headquarters (Code H).

Cash contributions. The recipient's cash outlay, including the outlay of money contributed to the recipient by third parties.

Closeout. The process by which a NASA determines that all applicable administrative actions and all required work of the award have been completed by the recipient and NASA.

Commercial item. The definition in FAR 2.101 is applicable.

Cooperative agreement. As defined by 31 U.S.C. 6305, cooperative agreements are financial assistance instruments used to stimulate or support activities for authorized purposes and in which the Government participates substantially in the performance of the effort. This regulation covers only cooperative agreements with commercial firms. Cooperative agreements with universities and non-profit organizations are covered by 14 CFR Part 1260.

Cost sharing or matching. That portion of project or program costs not borne by the Federal Government except that the recipient's contribution may be reimbursable under other Government awards as allowable IR&D costs pursuant to 48 CFR (NFS) 1831.205-18.

Date of completion. *T*he date on which all work under an award is completed or the date on the award document, or any supplement or amendment thereto, on which NASA sponsorship ends.

Days. Calendar days, unless otherwise indicated.

Government furnished equipment. Equipment in the possession of, or acquired directly by, the Government and subsequently delivered, or otherwise made available, to a Recipient and equipment procured by the Recipient with Government funds under a cooperative agreement.

Grant Officer. A Government employee who has been delegated the authority to negotiate, award, or administer grants or cooperative agreements. A Contracting Officer may serve as a Grant Officer if authorized by installation procurement regulations.

Incremental funding. A method of funding a cooperative agreement where the funds initially allotted to the cooperative agreement are less than the award amount. Additional funding is added as described in §1274.918.

Recipient. An organization receiving financial assistance under a cooperative agreement to carry out a project or program. A recipient may be an individual firm, a consortium, a partnership, etc.

Resource contribution. The total value of resources provided by either party to the cooperative agreement including both cash and non-cash contributions.

Support contractor means a NASA contractor performing part or all of the NASA responsibilities under a cooperative agreement.

Suspension. An action by NASA or the recipient that temporarily discontinues efforts under an award, pending corrective action or pending a decision to terminate the award. Suspension of an award is a separate action from suspension under Federal agency regulations implementing E.O.=s 12549 and 12689, "Debarment and Suspension."

Technical officer. The official of the cognizant NASA office who is responsible for monitoring the technical aspects of the work under a cooperative agreement. A Contracting Officer's Technical Representative may serve as a Technical Officer.

Termination. The cancellation of a cooperative agreement in whole or in part, by either party at any time prior to the date of completion.

§**1274.103 Effect on other issuances.**

For awards subject to this Regulation, all administrative requirements of codified program regulations, program manuals, handbooks and other nonregulatory materials which are inconsistent with the requirements of this Regulation shall be superseded, except to the extent they are required by statute, or authorized in accordance with the deviations provision in § 1274.104.

§**1274.104 Deviations.**

(a) The Associate Administrator for Procurement may grant exceptions for classes of or individual cooperative agreements from the requirements of this Regulation when exceptions are not prohibited by statute.

(b) *Applicability.* A deviation is required for any of the following:

(1) When a prescribed provision set forth in this regulation for use verbatim is modified or omitted.

(2) When a provision is set forth in this regulation, but not prescribed for use verbatim, and the installation substitutes a provision which is inconsistent with the intent, principle, and substance of the prescribed provision.

(3) When a NASA form or other form is prescribed by this regulation, and that form is altered or another form is used in its place.

(4) When limitations, imposed by this regulation upon the use of a provision, form, procedure, or any other action, are not adhered to.

(c) *Request for deviations*. Requests for authority to deviate from this regulation will be forwarded to Headquarters, Contract Management Division (Code HK). Such requests, signed by the Procurement Officer, shall contain as a minimum:

(1) A full description of the deviation and identification of the regulatory requirement from which a deviation is sought.

(2) Detailed rationale for the request, including any pertinent background information.

(3) The name of the recipient and identification of the cooperative agreement affected, including the dollar value.

(4) A statement as to whether the deviation has been requested previously, and, if so, circumstances of the previous request(s).

(5) A description of the intended effect of the deviation.

(6) A copy of legal counsel's concurrence or comments.

§**1274.105 Approval of Cooperative Agreement Notices (CANs) and cooperative agreements.**

(a) As soon as possible after the initial decision is made by a Headquarters program office or Center procurement personnel to use the CAN process, the cognizant program office or procurement office shall notify the Associate Administrator for Procurement (Code HS) of the intent to use a CAN in all cases where the total Government funds to be awarded in response to CAN proposals is expected to equal or exceed $10 million. All

such notifications, as described below, shall be concurred in by the Procurement Officer. This requirement also applies in those cases where an unsolicited proposal is received and a decision is made to award a cooperative agreement in which the recipient (or one or more members of a "team" of recipients) is a commercial firm and the total Government funds are expected to equal or exceed $10 million.

(b) The required notification is to be accomplished by sending an electronic mail (e-mail) message to the following address at NASA Headquarters: **can@hq.nasa.gov.** The notification must include the following information, as a minimum:

(1) Identification of the cognizant center and program office,

(2) Description of the proposed program for which proposals are to be solicited,

(3) Rationale for decision to use a CAN rather than other types of solicitations,

(4) The amount of Government funding to be available for awards,

(5) Estimate of the number of cooperative agreements to be awarded as a result of the CAN,

(6) The percentage of cost-sharing to be required, and

(7) Tentative schedule for release of CAN and award of cooperative agreements

(c) Code HS will respond by e-mail message to the sender, with a copy of the message to the Procurement Officer, within 5 working days of receipt of this initial notification. The response will address the following:

(1) Whether Code HS agrees or disagrees with the appropriateness for using a CAN for the effort described,

(2) Whether Code HS will require review and approval of the CAN before its issuance,

(3) Whether Code HS will require review and approval of the selected offeror's cost sharing arrangement (e.g., cost sharing percentage; type of contribution (cash, labor, etc.)), and

(4) Whether Code HS will require review and approval of the resulting cooperative agreement(s).

(d) If a response from Code HS is not received within 5 working days of notification, the program office or center may proceed with release of the CAN and award of the cooperative agreements as described.

Pre-Award Requirements

§**1274.201 Purpose.** Sections 1274.202 through 1274.207 prescribe forms and instructions and address other pre-award matters.

§**1274.202 Solicitations and proposals.**

(a) Consistent with 31 U.S.C. 6301(3), NASA uses competitive procedures to award cooperative agreements whenever possible. An award will normally be made as a result of a Cooperative Agreement Notice (CAN) which envisions a cooperative agreement as the award instrument. A Commerce Business Daily synopsis or a synopsis on the NASA Acquisition Internet Service will be used to publicize the CAN.

(b) *Unsolicited Proposals*.

(1) An award may be made as a result of an unsolicited proposal. The unsolicited proposal must evidence a unique and innovative idea or approach which is not the subject of a current or anticipated solicitation. When a cooperative agreement is awarded as a result of an unsolicited proposal, a Commerce Business Daily synopsis or a synopsis on the NASA Acquisition Internet Service will be used to provide an opportunity for other firms/consortia to express an interest in the agreement unless the exception in 48 CFR (FAR) 5.202(a)(8) applies. Respondents should be given a minimum of thirty days to respond. If interest is expressed, a decision must be made to proceed with the award or to issue a solicitation for competitive proposals.

(2) Prior to an award made as the result of an unsolicited proposal, the award must be approved by the Procurement Officer if NASA's total resource contribution is below $5 million. Center Director approval is required if NASA's total resource contribution is $5 million or more. For Headquarters cooperative agreements, approval by the Associate Administrator for Procurement is required if NASA's total resource contribution is $5 million or more.

(c) *Cost and payment matters*.

(1) The expenditure of Government funds by the Recipient and the allowability of costs recognized as a resource contribution by the Recipient shall be governed by the FAR cost principles, 48 CFR part 31. If the Recipient is a consortium which includes non-commercial entities as members, cost allowability for those members will be determined as follows: Allowability of costs incurred by State, local or federally-recognized Indian tribal governments is determined in accordance with the provisions of OMB Circular A-87, "Cost Principles for State and Local Governments." The allowability of costs incurred by non-profit organizations is determined in accordance with the provisions of OMB Circular A-122, "Cost Principles for Non-Profit Organizations." The allowability of costs incurred by institutions of higher education is determined in accordance with the provisions of OMB Circular A-21, "Cost Principles for Educational Institutions." The allowability of costs incurred by hospitals is determined in accordance with the provisions of Appendix E of 45 CFR part 74, "Principles for Determining Costs Applicable to Research and Development Under Grants and Contracts with Hospitals." Recipient's method for accounting for the expenditure of funds must be consistent with Generally Accepted Accounting Principles.

(2) *Cost sharing*. A substantial resource contribution on the part of the Recipient is required. The Recipient is expected to contribute at least 50% of the total resources required to accomplish the cooperative agreement. Recipient contributions may be either cash or non-cash or both. In those cases in which a contribution of less than 50% is anticipated from the Recipient, approval of the Associate Administrator for Procurement (Code HS) is required prior to award. The request for approval should address the evaluation factor in the solicitation and how the proposal accomplishes those objectives to such a degree that a share ratio of less than 50% is warranted.

(3) *Fixed Funding*. Cooperative agreements are funded by NASA in a fixed amount. Payments in fixed amounts will be made by NASA in accordance with "Milestone Billings" which are discussed in paragraph (c)(4) of this section. If the Recipient completes the final milestone, final payment is made, and NASA will have completed its financial responsibilities under the agreement. However, if the cooperative agreement is terminated prior to achievement of all milestones, NASA's funding will be limited to milestone payments already made plus NASA's share of costs required by the Recipient to meet commitments which had in the judgment of NASA become firm prior to the effective date of termination and are otherwise appropriate. In no event shall these additional costs or payment exceed the amount of the next payable milestone billing amount.

(4) Milestone billings is the method of payment to the Recipient under cooperative agreements. Performance based milestones are used as the basis of establishing a set of verifiable milestones for payment purposes. Each milestone payment shall be established so that the Government payment is at the same share ratio as the cooperative agreement share ratio. If the Recipient is a consortium, the Articles of Collaboration is required to contain an extensive list of performance based milestones that the consortium has agreed to. Generally, payments should not be made more than once monthly; ideally, payments will be made about every 60 to 90 days but in all cases

should be made on the basis of verifiable, significant events as opposed to the passage of time. The last payment milestone should be large enough to ensure that the Recipient completes its responsibilities under the cooperative agreement (or funds should be reserved for payment until after completion of the cooperative agreement). The Government technical officer must verify completion of each milestone to the Grants Officer as part of the payment process.

(5) *Incremental funding*. Cooperative agreements may be incrementally funded subject to the following:

(i) The total value of the NASA cash contribution is $50,000 or more.

(ii) The period of performance overlaps the succeeding fiscal year.

(iii) The funds are not available to fully fund the cooperative agreement at the time of award.

(6) *Cost sharing*. Cost sharing requirements on cooperative agreements with commercial firms are based on section 23 of OMB Circular A-110, November 23, 1993. Only cash or certain non-cash resources are acceptable sources for the Recipient contribution to a cooperative agreement. Acceptable non-cash resources include such items as purchased equipment, equipment, labor, office space, etc. The actual or imputed value of intellectual property such as patent rights, data rights, trade secrets, etc., are not acceptable as sources for the Recipient contribution.

(7) Recipients shall not be paid a profit under cooperative agreements. Profit may be paid by the Recipient to subcontractors, if the subcontractor is not part of the offering team and the subcontract is an arms-length relationship.

(8) The Recipient's resource share of the cooperative agreement may be allocated as part of its IR&D program in accordance with a class deviation pursuant to 48 CFR (NFS) 1831.205-18.

(9) The CAN must provide a description of the non-cash Government contribution (personnel, equipment, facilities, etc.) as part of the Government's contribution to the cooperative agreement in addition to funding. The offeror may propose that additional non-cash Government resources be provided under two conditions. First, the offeror is responsible for verifying the availability of the resources and their suitability for their intended purpose and, second, those resources are part of the Government contribution (which must be matched by the Recipient) and paid for directly by the awarding organization.

(d) *Consortia as recipients*.

(1) The use of consortia as Recipients for cooperative agreements is encouraged. Consortia will tend to bring to a cooperative agreement a broader range of capabilities and resources. A consortium is a group of organizations that enter into an agreement to collaborate for the purposes of the cooperative agreement with NASA. The agreement to collaborate can take the form of a legal entity such as a partnership or joint venture but it is not necessary that such an entity be created. A consortium may be made up of firms which normally compete for commercial or Government business or may be made up of firms which perform complementary functions in a given industry. The inclusion of non-profit or educational institutions, small businesses, or small disadvantaged businesses in the consortium could be particularly valuable in ensuring that the results of the consortium's activities are disseminated.

(2) Key to the success of the cooperative agreement with a consortium is the consortium's Articles of Collaboration, which is a definitive description of the roles and responsibilities of the consortium's members. It should also address to the extent appropriate: commitments of financial, personnel, facilities and other resources, a detailed milestone chart of consortium activities, accounting requirements, subcontracting procedures, disputes, term of the agreement, insurance and liability issues, internal and external reporting requirements, management structure of the consortium, obligations of organizations withdrawing from the consortia, allocation of data and patent rights among the consortia members, agreements, if any, to share existing technology and data, the firm which is responsible for the completion of the consortium's responsibilities under the cooperative agreement and has the authority to commit the consortium and receive payments from NASA, employee policy issues, etc.

(3) An outline of the Articles of Collaboration should be required as part of the proposal and evaluated during the source selection process.

(e) *Metric system of measurement*. The Metric Conversion Act, as amended by the Omnibus Trade and Competitiveness Act (15 U.S.C. 205) declares that the metric system is the preferred measurement system for U.S. trade and commerce. NASA's policy with respect to the metric measurement system is stated in NMI 8010.2A, Use of the Metric System of Measurement in NASA Programs, dated June 11,1991.

§1274.203 Intellectual property.

(a) A cooperative agreement covers the disposition of rights relating to inventions and patents between NASA and the Recipient. If the Recipient is a consortium or partnership, rights flowing between multiple organizations in a consortium must be negotiated separately and formally documented, preferably in the Articles of Collaboration.

(b) Patent rights clauses are required by statute and regulation. The clauses exist for Recipients of the Agreement whether they are:

(1) other than small business or nonprofit organizations (generally referred to as large businesses) or

(2) small businesses or nonprofit organizations.

(c) There are five situations in which inventions may arise under a cooperative agreement: Recipient Inventions, Subcontractor Inventions, NASA Inventions, NASA Support Contractor Inventions, and Joint Inventions with Recipient.

(d)(1) *Recipient Inventions*.

(i) A Recipient, if a large business, is subject to section 305 of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2457) relating to property rights in inventions. The term "invention" includes any invention, discovery, improvement, or innovation. Title to an invention made under a cooperative agreement by a large business Recipient initially vests with NASA. The Recipient may request a waiver under the NASA Patent Waiver Regulations to obtain title to inventions made under the Agreement. Such a request may be made in advance of the Agreement (or 30 days thereafter) for all inventions made under the Agreement. Alternatively, requests may be made on a case by case basis any time an individual invention is made. Such waivers are liberally and expeditiously granted after review by NASA's Invention and Contribution Board and approval by NASA's General Counsel. When a waiver is granted, any inventions made in the performance of work under the Agreement are subject to certain reporting, election and filing requirements, a royalty-free license to the Government, march-in rights, and certain other reservations.

(ii) A Recipient, if a small business or nonprofit organization, may elect to retain title to its inventions. The term "nonprofit organization" is defined in 35 U.S.C. 201(i) and includes universities and other institutions of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code. The Government obtains an irrevocable, nonexclusive, royalty-free license.

(2) *Subcontractor Inventions*.

(i) Large Business. If a Recipient enters a subcontract (or similar arrangement) with a large business organization for experimental, developmental, research, design or engineering

work in support of the Agreement to be done in the United States, its possessions, or Puerto Rico, section 305 of the Space Act applies. The clause applicable to large business organizations is to be used (suitably modified to identify the parties) in any subcontract. The subcontractor may request a waiver under the NASA Patent Waiver Regulations to obtain rights to inventions made under the subcontract just as a large business Recipient can (see paragraph (d)(1)(i) of this section). It is strongly recommended that a prospective large business subcontractor contact the NASA installation Patent Counsel or Intellectual Property Counsel to assure that the right procedures are followed. Just like the Recipient, any inventions made in the performance of work under the Agreement are subject to certain reporting, election and filing requirements, a royalty-free license to the Government, march-in rights, and certain other reservations.

(ii) Non-profit organization or Small Business. In the event the Recipient enters into a subcontract (or similar arrangement) with a domestic nonprofit organization or a small business firm for experimental, developmental, or research work to be performed under the Agreement, the requirements of 35 U.S.C. 200 et seq. regarding "Patent Rights in Inventions Made With Federal Assistance," apply. The subcontractor has the first option to elect title to any inventions made in the performance of work under the Agreement, subject to specific reporting, election and filing requirements, a royalty-free license to the Government, march-in rights, and certain other reservations that are specifically set forth.

(iii) Work outside the United States. If the Recipient subcontracts for work to be done outside the United States, its possessions or Puerto Rico, the NASA installation Patent Counsel or Intellectual Property Counsel should be contacted for the proper patent rights clause to use and the procedures to follow.

(iv) Notwithstanding the above, and in recognition of the Recipient's substantial contribution, the Recipient is authorized, subject to rights of NASA set forth elsewhere in the Agreement, to:

(A) Acquire by negotiation and mutual agreement rights to a subcontractor's subject inventions as the Recipient may deem necessary, or

(B) If unable to reach agreement pursuant to paragraph (d)(2)(iv)(A) of this section, request that NASA invoke exceptional circumstances as necessary pursuant to 37 CFR 401.3(a)(2) if the prospective subcontractor is a small business firm or nonprofit organization, or for all other organizations, request that such rights for the Recipient be included as an additional reservation in a waiver granted pursuant to 14 CFR 1245.1. The exercise of this exception does not change the flow down of the applicable patent rights clause to subcontractors. Applicable laws and regulations require that title to inventions made under a subcontract must initially reside in either the subcontractor or NASA, not the Recipient. This exception does not change that. The exception does authorize the Recipient to negotiate and reach mutual agreement with the subcontractor for the grant-back of rights. Such grant-back could be an option for an exclusive license or an assignment, depending on the circumstances.

(3) *NASA Inventions*. NASA will use reasonable efforts to report inventions made by its employees as a consequence of, or which bear a direct relation to, the performance of specified NASA activities under an Agreement. Upon timely request, NASA will use its best efforts to grant Recipient first option to acquire either an exclusive or partially-exclusive, revocable, royalty-bearing license, on terms to be negotiated, for any patent applications and patents covering such inventions. This exclusive or partially-exclusive license to the Recipient will be subject to the retention of rights by or on behalf of the Government for Government purposes.

(4) *NASA Support Contractor Inventions*. It is preferred that NASA support contractors be excluded from performing any of NASA's responsibilities under the Agreement since the rights obtained by a NASA support contractor could work against the rights needed by the Recipient. In the event NASA support contractors are tasked to work under the Agreement and inventions are made by support contractor employees, the support contractor will normally obtain rights in such inventions. However, if NASA has the right to acquire or has acquired title to such inventions, upon timely request, NASA will use its best efforts to grant Recipient first option to acquire either an exclusive or partially exclusive, revocable, royalty-bearing license, upon terms to be negotiated, for any patent applications and patents covering such inventions. This exclusive or partially-exclusive license to the Recipient will be subject to the retention of rights by or on behalf of the Government for Government purposes.

(5) *Joint Inventions*.

(i) NASA and the Recipient agree to use reasonable efforts to identify and report to each other any inventions made jointly between NASA employees (or employees of NASA support contractors) and employees of Recipient. For large businesses, the Associate General Counsel (Intellectual Property) may agree that the United States will refrain, for a specified period, from exercising its undivided interest in a manner inconsistent with Recipient's commercial interest. For small business firms and nonprofit organizations, the Associate General Counsel (Intellectual Property) may agree to assign or transfer whatever rights NASA may acquire in a subject invention from its employee to the Recipient as authorized by 35 U.S.C. 202(e). The grant officer negotiating the Agreement with small business firms and nonprofit organizations can agree, up front, that NASA will assign whatever rights it may acquire in a subject invention from its employee to the small business firm or nonprofit organization. Requests under this paragraph shall be made through the Center Patent Counsel.

(ii) NASA support contractors may be joint inventors. If a NASA support contractor employee is a joint inventor with a NASA employee, the same provisions apply as those for NASA Support Contractor Inventions. The NASA support contractor will retain or obtain nonexclusive licenses to those inventions in which NASA obtains title. If a NASA support contractor employee is a joint inventor with a Recipient employee, the NASA support contractor and Recipient will become joint owners of those inventions in which they have elected to retain title or requested and have been granted waiver of title. Where the NASA support contractor has not elected to retain title or has not been granted waiver of title, NASA will jointly own the invention with the Recipient.

(e) *Licenses to Recipient(s).*

(1) Any exclusive or partially exclusive commercial licenses are to be royalty-bearing consistent with Government-wide policy in licensing its inventions. It also provides an opportunity for royalty-sharing with the employee-inventor, consistent with Government-wide policy under the Federal Technology Transfer Act.

(2) Upon application in compliance with 37 CFR part 404 -- Licensing of Government Owned Inventions, all Recipients shall be granted a revocable, nonexclusive, royalty-free license in each patent application filed in any country on a subject invention and any resulting patent in which the Government obtains title. Because cooperative agreements are cost sharing cooperative arrangements with a purpose of benefiting the public by improving the competitiveness of the Recipient and the Government receives an irrevocable, nonexclusive, royalty-free license in each Recipient subject invention, it is only equitable that the Recipient receive, at a minimum, a revocable, nonexclusive, royalty-free license in NASA inventions and NASA contractor inventions where NASA has acquired title.

(3) *Notice Requirements*. Once a Recipient has exercised its option to apply for an exclusive or partially exclusive license, a notice, identifying the invention and the Recipient, is published in the Federal Register, providing the public opportunity for filing written objections for 60 days.

(f) *Preference for United States Manufacture*. Despite any other provision, the Recipient agrees that any products embodying subject inventions or produced through the use of subject inventions shall be manufactured substantially in the United States. The intent of this provision is to support manufacturing jobs in the United States regardless of the status of the Recipient as a domestic or foreign controlled company. However, in individual cases, the requirement to manufacture substantially in the United States, may be waived by the Associate Administrator for Procurement (Code HS) upon a showing by the Recipient that under the circumstances domestic manufacture is not commercially feasible.

(g) *Space Act Agreements*. Invention and patent rights in cooperative agreements must comply with statutory and regulatory provisions. Where circumstances permit, a Space Act Agreement is available as an alternative instrument which can be more flexible in the area of invention and patent rights.

(h) *Data Rights*. Data rights provisions can and should be tailored to best achieve the needs and objectives of the respective parties concerned.

(1) The data rights clause at 1274.905 assumes a substantially equal cost sharing relationship where collaborative research, experimental, developmental, engineering, demonstration, or design activities are to be carried out, such that it is likely that "proprietary" information will be developed and/or exchanged under the agreement. If cost sharing is unequal or no extensive research, experimental, developmental, engineering, demonstration, or design activities are likely, a different set of clauses may be appropriate.

(2) The primary question that must be answered when developing data clauses is what does each party need or intend to do with the data developed under the agreement. Accordingly, the data rights clauses may be tailored to fit the circumstances. Where conflicting goals of the parties result in incompatible data provisions, grant officers for the Government must recognize that private companies entering into cooperative agreements bring resources to that relationship and must be allowed to reap an appropriate benefit for the expenditure of those resources. However, since serving a public purpose is a major objective of a cooperative agreement, care must be exercised to ensure the Recipient is not established as a long term sole source supplier of an item or service and is not in a position to take unfair advantage of the results of the cooperative agreement. Therefore, a reasonable time period (depending on the technology, two to five years after production of the data) may be established after which the data first produced by the Recipient in the performance of the agreement will be made public.

(3) Data can be generated from different sources and can have various restrictions placed on its dissemination. Recipient data furnished to NASA can exist prior to, or be produced outside of, the agreement or be produced under the agreement. NASA can also produce data in carrying out its responsibilities under the agreement. Each of these areas need to be covered.

(4) For data, including software, first produced by the Recipient under the agreement, the Recipient may assert copyright. Data exchanged with a notice showing that the data is protected by copyright must include appropriate licenses in order for NASA to use the data as needed.

(5) Recognizing that the dissemination of the results of NASA's activities is a primary objective of a cooperative agreement, the parties should specifically delineate what results will be published and under what conditions. This should be set forth in the clause of the cooperative agreement entitled "Publication and Reports." Any such agreement on the publication of results should be stated to take precedence over any other clause in the cooperative agreement.

(6) In accordance with section 303(b) of the Space Act, any data first produced by NASA under the agreement which embodies trade secrets or financial information that would be privileged or confidential if it had been obtained from a private participant, will be marked with an appropriate legend and maintained in confidence for an agreed to period of up to five years (the maximum allowed by law). This does not apply to data other than that for which there has been agreement regarding publication or distribution. The period of time during which data first produced by NASA is maintained in confidence should be consistent with the period of time determined in accordance with paragraph (h)(2) of this section, before which data first produced by the Recipient will be made public. Also, NASA itself may use the marked data (under suitable protective conditions) for agreed-to purposes.

§1274.204 Evaluation and selection.

(a) A single technical evaluation factor is typically used for CANs. That evaluation factor should be one of the following: providing research and development or technology transfer, enhancing U.S. competitiveness, or developing a capability among U.S. firms. Award to foreign firms is not precluded if the evaluation factor is satisfied. Subfactors could include such things as fostering U.S. leadership, potential to advance technologies anticipated to enhance U.S. competitiveness, timeliness of proposed accomplishments, private sector commitment to commercialization, identification of specific potential commercial markets, appropriateness of business risk, potential for broad impact on the U.S. technology and knowledge base, level of commitment (contribution of private resources to the project), appropriateness of team member participation and relationships, appropriateness of management planning, relevant experience, qualifications and depth of management and technical staff, quality and appropriateness of resources committed to the project, performance bench marks, technical approach, business approach/resource sharing, past performance, the articles of collaboration, etc.

(b) Technical evaluation.

(1) Competitive technical proposal information shall be protected in accordance with 48 CFR (FAR) 15.411, Receipt of Proposals and quotations. Unsolicited proposals shall be protected in accordance with 48 CFR (FAR) 15.508, Prohibitions, and 48 CFR (FAR) 15.509, Limited use of data.

(2) The technical officer will evaluate proposals in accordance with the criteria in the CAN. Proposals selected for award will be supported by documentation as described in paragraph (c)(1) of this section. When evaluation results in a proposal not being selected, the proposer will be notified in accordance with the CAN.

(3) The technical evaluation of proposals may include peer reviews. Since the business sense of a cooperative agreement proposal is critical to its success, NASA should reserve the right to utilize appropriate outside evaluators to assist in the evaluation of such proposal elements as the business base projections, the market for proposed products, and/or the impact of anticipated product price reductions. The use of outside evaluators shall be approved in accordance with 48 CFR (NFS) 1815.413-2(c)(2). It is strongly recommended that a numerical scoring system be established to rank proposals. Data provided to outside evaluators should be protected in accordance with 48 CFR (NFS) 1815.413-2(e).

(4) *Unsolicited proposals.* Evaluation of unsolicited proposals must consider whether: the subject of the proposal is available to NASA from another source without restriction; the proposal closely resembles a pending competitive acquisition; and the research proposed demonstrates an innovative and unique method, approach, or concept. Organizations submitting

unaccepted proposals will be notified in writing.

(c) *Documentation requirements*. For proposals selected for award, the technical officer will prepare and furnish to the grant officer the following documentation:

(1) For a competitively selected proposal, a signed selection statement and technical evaluation based on the evaluation criteria stated in the solicitation.

(2) For an unsolicited proposal, a justification for acceptance of an unsolicited proposal (JAUP) prepared by the cognizant technical office. The JAUP shall be submitted for the approval of the grant officer after review and concurrence at a level above the technical officer. The evaluator shall consider the following factors, in addition to any others appropriate for the particular proposal:

(i) Unique and innovative methods, approaches or concepts demonstrated by the proposal.

(ii) Overall scientific or technical merits of the proposal.

(iii) The offeror's capabilities, related experience, facilities, techniques, or unique combinations of these which are integral factors for achieving the proposal objectives.

(iv) The qualifications, capabilities, and experience of the proposed key personnel who are critical in achieving the proposal objectives.

(v) Current, open solicitations under which the unsolicited proposal could be evaluated.

(d) *Cost evaluation*.

(1) The grant officer and technical team will determine whether the overall proposed cost of the project is reasonable and that the Recipient's contribution is valid, verifiable, and available. Commitments should be obtained and verified to the extent practical from the offeror or members of the consortia that the proposed contributions can and will be made as specified in the proposal or statement of work.

(i) If the Recipient's verified share on a cooperative agreement equals or exceeds 50% of the total cost of the agreement and the total value of the agreement is less than $5 million, the cost evaluation of the offeror's proposal should focus on the overall reasonableness and timing of the proposer's contribution. Cost or pricing data should not be required and information other than cost or pricing data (defined in 48 CFR (FAR) 15.801) should not normally be required.

(ii) If the Recipient's share is projected to be less than 50% or the total value of the agreement is more than $5 million, a more in-depth analysis of the proposed costs should be undertaken. Only information other than cost or pricing data should be required. An analysis consistent with 48 CFR (FAR) 15.805-3 through 15.805-5 should be performed.

(2) As part of the evaluation of the cost proposal, the source of the recipient's contribution should be determined. Each of the cost elements contributed by the recipient and their amounts should be identified. If the contribution will consist at least in part of IR&D, the extent to which the IR&D may be recoverable from Government awards should be established. This will involve using the estimated Government participation rate of the recipient's General and Administrative indirect cost base for the period of the cooperative agreement. The results of the evaluation are to be documented in the cooperative agreement file.

(e) If the cooperative agreement is to be awarded to a consortium, a completed, formally executed Articles of Collaboration is required prior to award.

(f) *Printing, binding, and duplicating*. Proposals for effort which involve printing, binding, and duplicating in excess of 25,000 pages are subject to the regulations of the Congressional Joint Committee on Printing. The technical office will refer such proposals to the Installation Central Printing Management Officer (ICPMO) to ensure compliance with NMI 1490.1. The grant officer will be advised in writing of the results of the ICPMO review.

§1274.205 Award procedures.

(a) *General*. Multiple year cooperative agreements are encouraged, but normally they should not extend beyond two years.

(b) *Award above proposed amount*. Awards of cooperative agreements in response to competitive solicitations will not result in providing more NASA funds or resources than was anticipated in the Recipient's proposal. If additional funds or resources are deemed necessary, they will be provided by the Recipient and the Government cost share percentage will be adjusted downward.

(c) *Changes to cooperative agreements*. Cost growth or in-scope changes shall not increase the amount of NASA's contribution. Additional costs which arise during the performance of the cooperative agreement are the responsibility of the Recipient. Funding for work required beyond the scope of the cooperative agreement must be sought through the submission of a proposal which will be treated as an unsolicited proposal.

(d) *Bilateral award*. All cooperative agreements awarded under this regulation will be awarded on a bilateral basis.

(e) *Certifications and representations*.

(1) Unless prohibited by statute or codified regulation, Recipients will be encouraged to submit certifications and representations required by statute, executive order, or regulation on an annual basis, if the Recipients have ongoing and continuing relationships with the agency. Annual certifications and representations shall be signed by responsible officials with the authority to ensure Recipients' compliance with the pertinent requirements.

(2) Civil rights requirements--nondiscrimination in certain Federally-funded programs. Recipients must furnish assurances of compliance with civil rights statutes specified in 14 CFR parts 1250 through 1252. Such assurances are not required for each cooperative agreement, if they have previously been furnished and remain current and accurate. Certifications to NASA are normally made on NASA Form 1206, which may be obtained from the grant officer. Upon acceptance, the grant officer will forward assurances to the NASA Office of Equal Opportunity Programs for recording and retention purposes.

(3) NASA cooperative agreements are subject to the provisions of 14 CFR Part 1265, Governmentwide Debarment and Suspension (Nonprocurement) and Governmentwide requirements for Drug-Free Workplace (Grants), unless excepted by §§1265.110 and 1265.610.

(4) *Lobbying Certification*. A Lobbying Certification in accordance with 14 CFR part 1271 will be obtained prior to award.

(f) Indemnification under Public Law 85-804 is not authorized for cooperative agreements.

§1274.206 Document format and numbering.

(a) *Formats*. Grant officers are authorized to use the format in Exhibit A of Appendix C to this Part 1274 for the award of all cooperative agreements. Computer-generated versions and omission of inapplicable items are allowed.

(b) *Cooperative agreement numbering*. The identification numbering system for all cooperative agreements shall conform to 48 CFR (NFS) 1804.7102-3, except that a NCC prefix will be used in lieu of the NAS prefix.

§1274.207 Distribution of cooperative agreements.

Copies of cooperative agreements and modifications will be provided to: payment office, technical officer, administrative grant officer when delegation has been made, NASA Center for Aerospace Information (CASI), Attn: Document Processing Section, 800 Elkridge Landing Road, Linthicum Heights, Maryland 21090-2934, and any other appropriate recipient. Copies of the statement of work, contained in the Recipient's

proposal and accepted by NASA, will be provided to the administrative grant officer and CASI. The cooperative agreement file will contain a record of the addresses for distributing agreements and supplements.

Administration

§1274.301 Delegation of administration.

Normally, cooperative agreements will be administered by the awarding activity.

§1274.302 Transfers, novations, and change of name agreements.

(a) *Transfer of cooperative agreements*. Novation is the only means by which a cooperative agreement may be transferred from one Recipient to another.

(b) *Novation and change of name*. All novation agreements and change of name agreements of the Recipient, prior to execution, shall be reviewed by NASA legal counsel for legal sufficiency prior to approval.

Government Property

§1274.401 Government property.

The accomplishment of a cooperative agreement may require the purchase of equipment for a wide range of purposes. If this equipment is purchased with Government funds, i.e., as part of the Government contribution to the cooperative agreement, it becomes Government property and must be disposed of in accordance with 48 CFR (FAR) Part 45 at the conclusion of the cooperative agreement. In some cases, this may meet the needs of the parties. If, however, the Recipient may need the equipment to continue commercial efforts following the cooperative agreement, it should be purchased by the Recipient and included as a non-cash contribution of the Recipient. In this way, it is not procured, not even in part, with Government funds and the Government acquires no ownership interest. Procurement by the Recipient may be before or during the performance of the cooperative agreement.

Procurement Standards

§1274.501 Subcontracts.

Recipients (individual firms or consortia) are not authorized to issue grants or cooperative agreements to subrecipients. All contracts, including small purchases, awarded by Recipients and their contractors shall contain the procurement provisions of Appendix A to this part, as applicable and may be subject to approval requirements cited in 1274.925.

Reports and Records

§1274.601 Retention and access requirements for records.

(a) This Subpart sets forth requirements for record retention and access to records for awards to Recipients.

(b) Financial records, supporting documents, statistical records, and all other records pertinent to an award shall be retained for a period of three years from the date of submission of the final invoice. The only exceptions are the following:

(1) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved and final action taken.

(2) Records for real property and equipment acquired with Federal funds shall be retained for 3 years after final disposition.

(3) When records are transferred to or maintained by NASA, the 3-year retention requirement is not applicable to the Recipient.

(4) Indirect cost rate proposals, cost allocations plans, etc. as specified in paragraph (g) of this section.

(c) Copies of original records may be substituted for the original records if authorized by NASA.

(d) NASA shall request transfer of certain records to its custody from Recipients when it determines that the records possess long term retention value. However, in order to avoid duplicate record keeping, NASA may make arrangements for Recipients to retain any records that are continuously needed for joint use.

(e) NASA, the Inspector General, Comptroller General of the United States, or any of their duly authorized representatives, have the right of timely and unrestricted access to any books, documents, papers, or other records of Recipients that are pertinent to the awards, in order to make audits, examinations, excerpts, transcripts and copies of such documents. This right also includes timely and reasonable access to a Recipient's personnel for the purpose of interview and discussion related to such documents. The rights of access in this paragraph are not limited to the required retention period, but shall last as long as records are retained.

(f) Unless required by statute, NASA shall not place restrictions on Recipients that limit public access to the records of Recipients that are pertinent to an award, except when NASA can demonstrate that such records shall be kept confidential and would have been exempted from disclosure pursuant to the Freedom of Information Act (5 U.S.C. 552) if the records had belonged to NASA.

(g) *Indirect cost rate proposals, cost allocations plans, etc*. This paragraph applies to the following types of documents, and their supporting records: indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates).

(1) *If submitted for negotiation*. If the Recipient submits to NASA or the subrecipient submits to the Recipient the proposal, plan, or other computation to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts on the date of such submission.

(2) *If not submitted for negotiation*. If the Recipient is not required to submit to NASA or the subrecipient is not required to submit to the Recipient the proposal, plan, or other computation for negotiation purposes, then the 3-year retention period for the proposal, plan, or other computation and its supporting records starts at the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation.

Suspension or Termination

§1274.701 Suspension or termination.

A cooperative agreement provides both NASA and the Recipient the ability to terminate the agreement if it is in their best interests to do so. For example, NASA may terminate the agreement if the Recipient is not making anticipated technical progress, if the Recipient materially fails to comply with the terms of the agreement, if the Recipient materially changes the objective of the agreement, or if appropriated funds are not available to support the program. Similarly, the Recipient may terminate the agreement if, for example, technical progress is not being made, if the firms are shifting their technical emphasis, or if other technological advances have made the effort obsolete.

NASA or the Recipient may also suspend the cooperative agreement for a short period of time if an assessment needs to be made as to whether the agreement should be terminated.

After-the-Award Requirements

§**1274.801 Purpose.**

Sections 1274.802 and 1274.803 contain closeout procedures and other procedures for subsequent disallowances and adjustments.

§**1274.802 Closeout procedures.**

(a) Recipients shall submit, within 90 calendar days after the date of completion of the cooperative agreement, all financial, performance, and other reports as required by the terms and conditions of the award. Extensions may be approved when requested by the Recipient.

(b) The Recipient shall account for any real and personal property acquired with Federal funds or received from the Federal Government in accordance with Subpart D.

§**1274.803 Subsequent adjustments and continuing responsibilities.**

The closeout of an award does not affect any of the following:

(a) Audit requirements in §1274.932.

(b) Property management requirements in subpart D of this part.

(c) Records retention as required in §1274.601.

Other Provisions and Special Conditions

§**1274.901 Other provisions and special conditions.**

The provisions set forth in this Subpart are to be incorporated in and made a part of all cooperative agreements. The provisions at 1274.902 through 1274.909 are to be incorporated in full text substantially as stated in this regulation. The provisions at 1274.910 through 1274.932 will be incorporated by reference in an enclosure to each cooperative agreement (see Exhibit A as listed in Appendix C to this part). For inclusion of provisions in subcontracts, see Subpart E--Procurement Standards of this part.

§**1274.902 Purpose.**

Purpose (FEB 1996)

The purpose of this cooperative agreement is to conduct a shared resource project that will lead to _____. This cooperative agreement will advance the technology developments and research which have been performed on _____. The specific objective is to _____. This work will culminate in _____.

§**1274.903 Responsibilities.**

Responsibilities (FEB 1996)

(a) This cooperative agreement will include substantial NASA participation during performance of the effort. NASA and the Recipient agree to the following Responsibilities, a statement of cooperative interactions to occur during the performance of this effort. NASA and the Recipient shall exert all reasonable efforts to fulfill the responsibilities stated below.

(b) NASA Responsibilities. Since NASA contractors may obtain certain intellectual property rights arising from work for NASA in support of this agreement, NASA will inform Recipient whenever NASA intends to use NASA contractors to perform technical engineering services in support of this agreement. The following responsibilities are hereby set forth with anticipated start and ending dates, as appropriate:

Responsibility	Start	End

(c) Recipient Responsibilities**.** The Recipient shall be responsible for particular aspects of project performance as set forth in the technical proposal dated _____, attached hereto (or Statement of Work dated _____, attached hereto.). The following responsibilities are hereby set forth with anticipated start and ending dates, as appropriate:

Responsibility	Start	End

§**1274.904 Resource Sharing Requirements.**

Resource Sharing Requirements (FEB 1996)

(a) NASA and the Recipient will share in providing the resources necessary to perform the agreement. NASA funding and non-cash contributions (personnel, equipment, facilities, etc.) and the dollar value of the Recipient's cash and/or non-cash contribution will be on a ___ (NASA) - ___ (Recipient) basis. Criteria and procedures for the allowability and allocability of cash and non-cash contributions shall be governed by Section 23, "Cost Sharing or Matching," of OMB Circular A-110. The "applicable federal cost principles" cited in OMB Circular A-110 shall be determined in accordance with 1274.919.

(b) The Recipient's share shall not be charged to the Government under this agreement or under any other contract, grant, or cooperative agreement, except to the extent that the Recipient's contribution may be allowable IR&D costs pursuant to 48 CFR (NFS) 1831.205-18.

§**1274.905 Rights in Data.**

Rights in Data (FEB 1996)

(a) Definitions

"Data," means recorded information, regardless of form, the media on which it may be recorded, or the method of recording. The term includes, but is not limited to, data of a scientific or technical nature, computer software and documentation thereof, and data comprising commercial and financial information.

(b) Data Categories

(1) General: Data exchanged between NASA and Recipient under this cooperative agreement will be exchanged without restriction as to its disclosure, use or duplication except as otherwise provided below in this provision.

(2) Background Data: In the event it is necessary for Recipient to furnish NASA with Data which existed prior to, or produced outside of, this cooperative agreement, and such Data embodies trade secrets or comprises commercial or financial information which is privileged or confidential, and such Data is so identified with a suitable notice or legend, the Data will be maintained in confidence and disclosed and used by NASA and its contractors (under suitable protective conditions) only for the purpose of carrying out NASA's responsibilities under this cooperative agreement. Upon completion of activities under this agreement, such Data will be disposed of as requested by Recipient.

(3) Data first produced by Recipient: In the event Data first produced by Recipient in carrying out Recipient's responsibilities under this cooperative agreement is furnished to NASA, and Recipient considers such Data to embody trade secrets or to comprise commercial or financial information which is privileged or confidential, and such Data is so identified with a suitable notice or legend, the Data will be maintained in confidence for a period of [insert "two" to five"] years after development of the data and be disclosed and used by ["NASA"

or "the Government," as appropriate] and its contractors (under suitable protective conditions) only for [insert appropriate purpose; for example: experimental; evaluation; research; development, etc.] by or on behalf of ["NASA" or "the Government" as appropriate] during that period. In order that ["NASA" or the "Government," as appropriate] and its contractors may exercise the right to use such Data for the purposes designated above, NASA, upon request to the Recipient, shall have the right to review and request delivery of Data first produced by Recipient. Delivery shall be made within a time period specified by NASA.

(4) Data first produced by NASA: As to Data first produced by NASA in carrying out NASA's responsibilities under this cooperative agreement and which Data would embody trade secrets or would comprise commercial or financial information that is privileged or confidential if it had been obtained from the Recipient, will be marked with an appropriate legend and maintained in confidence for an agreed to period of up to ( ) years [*insert a period up to 5 years*] after development of the information, with the express understanding that during the aforesaid period such Data may be disclosed and used (under suitable protective conditions) by or on behalf of the Government for Government purposes only, and thereafter for any purpose whatsoever without restriction on disclosure and use. Recipient agrees not to disclose such Data to any third party without NASA's written approval until the aforementioned restricted period expires.

(5) Copyright.

(i) In the event Data is exchanged with a notice indicating the Data is protected under copyright as a published copyrighted work, or are deposited for registration as a published work in the U.S. Copyright Office, the following paid-up licenses shall apply:

(A) If it is indicated on the Data that the Data existed prior to, or was produced outside of, this agreement, the receiving party and others acting on its behalf, may reproduce, distribute, and prepare derivative works for the purpose of carrying out the receiving party's responsibilities under this cooperative agreement; and

(B) If the furnished Data does not contain the indication of paragraph (b)(5)(i)(A) of this section, it will be assumed that the Data was first produced under this agreement, and the receiving party and others acting on its behalf, shall be granted a paid up, nonexclusive, irrevocable, world-wide license for all such Data to reproduce, distribute copies to the public, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the receiving party. For Data that is computer software, the right to distribute shall be limited to potential users in the United States.

(ii) When claim is made to copyright, the Recipient shall affix the applicable copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship to the data when and if the data are delivered to the Government.

(6) Oral and visual information. If information which the Recipient considers to embody trade secrets or to comprise commercial or financial information which is privileged or confidential is disclosed orally or visually to NASA, such information must be reduced to tangible, recorded form (i.e., converted into Data as defined herein), identified and marked with a suitable notice or legend, and furnished to NASA within 10 days after such oral or visual disclosure, or NASA shall have no duty to limit or restrict, and shall not incur any liability for, any disclosure and use of such information.

(7) Disclaimer of Liability. Notwithstanding the above, NASA shall not be restricted in, nor incur any liability for, the disclosure and use of:

(i) Data not identified with a suitable notice or legend as set in paragraph (b)(2) of this section; nor

(ii) Information contained in any Data for which disclosure and use is restricted under paragraphs (b)(2) or (3) of this section, if such information is or becomes generally known without breach of the above, is known to or is generated by NASA independently of carrying out responsibilities under this agreement, is rightfully received from a third party without restriction, or is included in data which Participant has, or is required to furnish to the U.S. Government without restriction on disclosure and use.

(c) Marking of Data. Any Data delivered under this cooperative agreement, by NASA or the Recipient, shall be marked with a suitable notice or legend indicating the data was generated under this cooperative agreement.

(d) Lower Tier Agreements. The Recipient shall include this provision, suitably modified to identify the parties, in all subcontracts or lower tier agreements, regardless of tier, for experimental, developmental, or research work.

§1274.906 Designation of New Technology Representative and Patent Representative.

Designation of New Technology Representative and Patent Representative (FEB 1996)

(a) For purposes of administration of the clause of this cooperative agreement entitled "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (LARGE BUSINESS)" or "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SMALL BUSINESS)" the following named representatives are hereby designated by the Grant Officer to administer such clause:

Title	Office Code	Address
New Technology Representative		
Patent Representative		

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquiries or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (LARGE BUSINESS)" clause or "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SMALL BUSINESS)" clause, unless otherwise authorized or directed by the Grant Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 48 CFR (NFS) 1827.375-3.

§1274.907 Disputes.

Disputes (FEB 1996)

(a) In the event that a disagreement arises, representatives of the parties shall enter into discussions in good faith and in a timely and cooperative manner to seek resolution. If these discussions do not result in a satisfactory solution, the aggrieved party may seek a decision from the Dispute Resolution Official under paragraph (b) of this provision. This request must be presented no more than (3) three months after the events giving rise to the disagreement have occurred.

(b) The aggrieved party may submit a written request for a decision to the _____ [Suggest this be the Center Director], who is designated as the Dispute Resolution Official. The written request shall include a statement of the relevant facts, a discussion of the unresolved issues, and

a specification of the clarification, relief, or remedy sought. A copy of this written request and all accompanying materials must be provided to the other party at the same time. The other party shall submit a written position on the matters in dispute within thirty (30) calendar days after receiving this notification that a decision has been requested. The Dispute Resolution Official shall conduct a review of the matters in dispute and render a decision in writing within thirty (30) calendar days of receipt of such written position.

§1274.908 Milestone Payments.

Milestone Payments (FEB 1996)

(a) By submission of the first invoice, the Recipient is certifying that it has an established accounting system which complies with generally accepted accounting principles, with the requirements of this agreement, and that appropriate arrangements have been made for receiving, distributing, and accounting for Federal funds received under this agreement.

(b) Payments will be made upon the following milestones: [The schedule for payments may be based upon the Recipient's completion of specific tasks, submission of specified reports, or whatever is appropriate.]

Date	Payment Milestone	Amount

(c) Upon submission by the Recipient of invoices in accordance with the provisions of the agreement and upon certification by NASA of completion of the payable milestone, the grant officer shall authorize payment.

(d) A payment milestone may be successfully completed in advance of the date appearing in paragraph (b) of this section. However, payment shall not be made prior to that date without the written consent of the Grant Officer.

(e) The Recipient is not entitled to partial payment for partial completion of a payment milestone.

(f) All preceding payment milestones must be completed before payment can be made for the next payment milestone.

(g) Invoices hereunder shall be submitted in the original and five copies to the Grant Officer for certification.

§1274.909 Term of this Agreement.

Term of this Agreement (FEB 1996)

The agreement commences on the effective date indicated on the attached cover sheet and continues until the expiration date indicated on the attached cover sheet unless terminated by either party. If all resources are expended prior to the expiration date of the agreement, the parties have no obligation to continue performance and may elect to cease at that point. The parties may extend the expiration date if additional time is required to complete the milestones at no increase in Government resources. Provisions of this Agreement, which, by their express terms or by necessary implication, apply for periods of time other than that specified as the agreement term, shall be given effect, notwithstanding expiration of the term of the agreement.

§1274.910 Authority.

Authority (FEB 1996)

This is a cooperative agreement as defined in 31 U.S.C. 6305 (the Chiles Act) and is entered into pursuant to the authority of 42 U.S.C. 2451, et seq. (the Space Act).

§1274.911 Patent Rights.

Patent Rights (FEB 1996)

(a) *Definitions.*

(1) *"Administrator"* means the Administrator or Deputy Administrator of NASA.

(2) *"Invention"* means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code.

(3) *"Made"* when used in relation to any invention means the conception or first actual reduction to practice such invention.

(4) *"Nonprofit organization"* means a domestic university or other institution of higher education or an organization of the type described in Section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under Section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)), or any domestic nonprofit scientific or educational organization qualified under a State nonprofit organization statute.

(5) *"Practical application"* means to manufacture, in the case of a composition or product; to practice, in the case of a process or method; or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

(6) *"Recipient"* means:

(i) the signatory Recipient party or parties or;

(ii) the Consortium, where a Consortium has been formed for carrying out Recipient responsibilities under this agreement.

(7) *"Small Business Firm"* means a domestic small business concern as defined at 15 U.S.C. 632 and implementing regulations of the Administrator of the Small Business Administration. (For the purpose of this definition, the size standard contained in 13 CFR 121.901 through 121.911 will be used.)

(8) *"Subject Invention"* means any invention of a Recipient and/or Government employee conceived or first actually reduced to practice in the performance of work under this Agreement.

(b) *Allocation of Principal Rights.*

(1) *Recipient Inventions*. For other than Small Business Firm or Nonprofit organization Recipients, the "PATENT RIGHTS - RETENTION BY RECIPIENT (LARGE BUSINESS)" provision applies. For Small Business Firm and Nonprofit organization Recipients, the "PATENT RIGHTS - RETENTION BY RECIPIENT (SMALL BUSINESS)" provision applies.

(2) *NASA Inventions*. NASA will use reasonable efforts to report inventions made by NASA employees as a consequence of, or which bear a direct relation to, the performance of specified NASA activities under this cooperative agreement and, upon timely request, NASA will use its best efforts to grant the Recipient or designated Consortium Member (if applicable) the first option to acquire either an exclusive or partially exclusive, revocable, royalty-bearing license, on terms to be subsequently negotiated, for any patent applications and patents covering such inventions, and subject to the license reserved in paragraph (b)(5)(i) of this section. Upon application in compliance with 37 CFR Part 404 -- Licensing of Government Owned Inventions, the Recipient or each Consortium Member (if applicable), shall be granted a revocable, nonexclusive, royalty-free license in each patent application filed in any country on a subject invention and any resulting patent in which the Government acquires title. Each nonexclusive license may extend to subsidiaries and affiliates, if any, within the corporate structure of the licensee and includes the right to grant sublicenses of the same scope to the extent the licensee was legally obligated to do so at the time the cooperative agreement was signed.

(3) *NASA Contractor Inventions*. In the event NASA contractors are tasked to perform work in support of specified NASA activities under this cooperative agreement and inventions are made by contractor employees, and NASA has the right to acquire or has acquired title to such inventions, NASA will use reasonable efforts to report such inventions and, upon timely request, NASA will use its best efforts to grant the Recipient or designated Consortium Member (if applicable) the first option to

acquire either an exclusive or partially exclusive, revocable, royalty-bearing license, upon terms to be subsequently negotiated, for any patent applications and patents covering such inventions, and subject to the license reserved in paragraph (b)(5)(ii) of this section. Upon application in compliance with 37 CFR Part 404 -- Licensing of Government Owned Inventions, the Recipient or each Consortium Member (if applicable), shall be granted a revocable, nonexclusive, royalty-free license in each patent application filed in any country on a subject invention and any resulting patent in which the Government acquires title. Each nonexclusive license may extend to subsidiaries and affiliates, if any, within the corporate structure of the licensee and includes the right to grant sublicenses of the same scope to the extent the licensee was legally obligated to do so at the time the cooperative agreement was signed.

(4) *Joint NASA and Recipient Inventions*. NASA and Recipient agree to use reasonable efforts to identify and report to each other any inventions made jointly between NASA employees (or employees of NASA contractors) and employees of Recipient.

(i) For other than small business firms and nonprofit organizations the Administrator may agree that the United States will refrain from exercising its undivided interest in a manner inconsistent with Recipient's commercial interest and to cooperate with Recipient in obtaining patent protection on its undivided interest on any waived inventions subject, however, to the condition that Recipient makes its best efforts to bring the invention to the point of practical application at the earliest practicable time. In the event that the Administrator determines that such efforts are not undertaken, the Administrator may void NASA's agreement to refrain from exercising its undivided interest and grant licenses for the practice of the invention so as to further its development. In the event that the Administrator decides to void NASA's agreement to refrain from exercising its undivided interest and grant licenses for this reason, notice shall be given to the Inventions and Contributions Board as to why such action should not be taken. Either alternative will be subject to the applicable license or licenses reserved in paragraph (b)(5) of this section.

(ii) For small business firms and nonprofit organization, NASA may assign or transfer whatever rights it may acquire in a subject invention from its employee to the Recipient as authorized by 35 U.S.C. 202(e).

(5) *Minimum rights reserved by the Government*. Any license or assignment granted Recipient pursuant to paragraphs (b)(2), (b)(3), or (b)(4) of this section will be subject to the reservation of the following licenses:

(i) As to inventions made solely or jointly by NASA employees, the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention by or on behalf of the United States; and

(ii) As to inventions made solely by, or jointly with, employees of NASA contractors, the rights in the Government of the United States as set forth in paragraph (b)(5)(i) of this section, as well as the revocable, nonexclusive, royalty-free license in the contractor as set forth in 14 CFR 1245.108.

(6) *Preference for United States manufacture*. The Recipient agrees that any products embodying subject inventions or produced through the use of subject inventions shall be manufactured substantially in the United States. However, in individual cases, the requirement to manufacture substantially in the United States may be waived by the Associate Administrator for Procurement (Code HS) with the concurrence of the Associate General Counsel for Intellectual Property upon a showing by the Recipient that under the circumstances domestic manufacture is not commercially feasible.

(7) Work performed by the Recipient under this cooperative agreement is considered undertaken to carry out a public purpose of support and/or stimulation rather than for acquiring property or services for the direct benefit or use of the Government. Accordingly, such work by the Recipient is not considered "by or for the United States" and the Government assumes no liability for infringement by the Recipient under 28 U.S.C. 1498.

§1274.912 Patent Rights - Retention by the Recipient (Large Business).

Patent Rights - Retention by the Recipient (Large Business) (FEB 1996)

(a) *Definitions*.

(1) "*Administrator*," as used in this clause, means the Administrator of the National Aeronautics and Space Administration (NASA) or duly authorized representative.

(2) "*Invention*," as used in this clause, means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the U.S.C.

(3) "*Made*," as used in relation to any invention, means the conception or first actual reduction to practice such invention.

(4) "*Nonprofit organization*," as used in this clause, means a domestic university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)), or any domestic nonprofit scientific or educational organization qualified under a State nonprofit organization statute.

(5) "*Practical application*," as used in this clause, means to manufacture, in the case of a composition or product; to practice, in the case of a process or method; or to operate, in case of a machine or system; and, in each, case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

(6) "*Reportable item*," as used in this clause, means any invention, discovery, improvement, or innovation of the Recipient, whether or not the same is or may be patentable or otherwise protectable under Title 35 of the United States Code, conceived or first actually reduced to practice in the performance of any work under this contract or in the performance of any work that is reimbursable under any clause in this contract providing for reimbursement of costs incurred prior to the effective date of this contract.

(7) "*Small business firm*," as used in this clause, means a domestic small business concern as defined at 15 U.S.C. 632 and implementing regulations of the Administrator of the Small Business Administration. (For the purpose of this definition, the size standard contained in 13 CFR 121.901 through 121.911 will be used.)

(8) "*Subject invention*," as used in this clause, means any reportable item which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant that is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321, et seq).

(b) *Allocation of principal rights*.

(1) *Presumption of title*.

(i) Any reportable item that the Administrator considers to be a subject invention shall be presumed to have been made in the manner specified in paragraph (1) or (2) of section 305(a) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2457(a)) (hereinafter called "the Act"), and the above presumption shall be conclusive unless at the time of reporting the reportable item the Recipient submits to the Grants Officer a written statement, containing supporting details, demonstrating that the reportable item was not made in the manner specified in paragraph (1) or (2) of section 305(a) of the Act.

(ii) Regardless of whether title to a given subject invention would otherwise be subject to an advance waiver or is the subject of a petition for waiver, the Recipient may

nevertheless file the statement described in paragraph (b)(1)(i) of this section. The Administrator will review the information furnished by the Recipient in any such statement and any other available information relating to the circumstances surrounding the making of the subject invention and will notify the Recipient whether the Administrator has determined that the subject invention was made in the manner specified in paragraph (1) or (2) of section 305(a) of the Act.

(2) *Property rights in subject inventions*. Each subject invention for which the presumption of paragraph (b)(1)(i) of this section is conclusive or for which there has been a determination that it was made in the manner specified in paragraph (1) or (2) of section 305(a) of the Act shall be the exclusive property of the United States as represented by NASA unless the Administrator waives all or any part of the rights of the United States, as provided in paragraph (b)(3) of this section.

(3) *Waiver of rights*.

(i) Section 305(f) of the Act provides for the promulgation of regulations by which the Administrator may waive the rights of the United States with respect to any invention or class of inventions made or that may be made under conditions specified in paragraph (1) or (2) of section 305(a) of the Act. The promulgated NASA Patent Waiver Regulations, 14 CFR part 1245, subpart 1, have adopted the Presidential memorandum on Government Patent Policy of February 18, 1983, as a guide in acting on petitions (requests) for such waiver of rights.

(ii) As provided in 14 CFR part 1245, subpart 1, Recipients may petition, either prior to execution of the contract or within 30 days after execution of the Agreement, for advance waiver of rights to any or all of the inventions that may be made under an Agreement. If such a petition is not submitted, or if after submission it is denied, the Recipient (or an employee inventor of the Recipient may petition for waiver of rights to an identified subject invention within eight months of first disclosure of invention in accordance with paragraph (e)(2) of this section or within such longer period as may be authorized in accordance with 14 CFR 1245.105. Further procedures are provided in the REQUESTS FOR WAIVER OF RIGHTS - LARGE BUSINESS provision.

(c) *Minimum rights reserved by the Government*.

(1) With respect to each Recipient subject invention for which a waiver of rights is applicable in accordance with 14 CFR part 1245, subpart 1, the Government reserves --

(i) An irrevocable, royalty-free license for the practice of such invention throughout the world by or on behalf of the United States or any foreign government in accordance with any treaty or agreement with the United States; and

(ii) Such other rights as stated in 14 CFR 1245.107.

(2) Nothing contained in this paragraph shall be considered to grant to the Government any rights with respect to any invention other than a subject invention.

(d) *Minimum rights to the Recipient*.

(1) The Recipient is hereby granted a revocable, nonexclusive, royalty-free license in each patent application filed in any country on a Recipient subject invention and any resulting patent in which the Government acquires title, unless the Recipient fails to disclose the subject invention within the times specified in paragraph (e)(2) of this section. The Recipient's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Recipient is a party and includes the right to grant sublicenses of the same scope to the extent the Recipient was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of the Administrator except when transferred to the successor of that part of the Recipient's business to which the invention pertains.

(2) The Recipient's domestic license may be revoked or modified by the Administrator to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with 14 CFR part 1245, subpart 2, Licensing of NASA Inventions. This license will not be revoked in that field of use or the geographical areas in which the Recipient has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the Administrator to the extent the Recipient, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the Recipient will be provided a written notice of the Administrator's intention to revoke or modify the license, and the Recipient will be allowed 30 days (or such other time as may be authorized by the Administrator for good cause shown by the Recipient) after the notice to show cause why the license should not be revoked or modified. The Recipient has the right to appeal, in accordance with 14 CFR 1245.211, any decision concerning the revocation or modification of its license.

(e) *Invention identification, disclosures, and reports*.

(1) The Recipient shall establish and maintain active and effective procedures to assure that reportable items are promptly identified and disclosed to Recipient personnel responsible for the administration of this clause within six months of conception and/or first actual reduction to practice, whichever occurs first in the performance of work under this contract. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of the reportable items, and records that show that the procedures for identifying and disclosing reportable items are followed. Upon request, the Recipient shall furnish the Grants Officer a description of such procedures for evaluation and for determination as to their effectiveness.

(2) The Recipient will disclose each reportable item to the Grants Officer within two months after the inventor discloses it in writing to Recipient personnel responsible for the administration of this clause or, if earlier, within six months after the Recipient becomes aware that a reportable item has been made, but in any event for subject inventions before any on sale, public use, or publication of such invention known to the Recipient. The disclosure to the agency shall be in the form of a written report and shall identify the contract under which the reportable item was made and the inventor(s) or innovator(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the reportable item. The disclosure shall also identify any publication, on sale, or public use of any subject invention and whether a manuscript describing such invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Recipient will promptly notify the agency of the acceptance of any manuscript describing a subject invention for publication or of any on sale or public use planned by the Recipient for such invention.

(3) The Recipient shall furnish the Grants Officer the following:

(i) Interim reports every 12 months (or such longer period as may be specified by the Grants Officer) from the date of the contract, listing reportable items during that period, and certifying that all reportable items have been disclosed (or that there are no such inventions) and that the procedures required by paragraph (e)(1) of this section have been followed.

(ii) A final report, within three months after completion of the contracted work, listing all reportable items or certifying that there were no such reportable items, and listing all subcontracts at any tier containing a patent rights clause or certifying that there

were no such subcontracts.

(4) The Recipient agrees, upon written request of the Grants Officer, to furnish additional technical and other information available to the Recipient as is necessary for the preparation of a patent application on a subject invention and for the prosecution of the patent application, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions.

(5) The Recipient agrees, subject to 48 CFR (FAR) 27.302(j), that the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this clause.

(f) *Examination of records relating to inventions*.

(1) The Grants Officer or any authorized representative shall, pursuant to the Retention and Examination of Records provision of this cooperative agreement, have the right to examine any books (including laboratory notebooks), records, and documents of the Recipient relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this contract to determine whether -

(i) Any such inventions are subject inventions;

(ii) The Recipient has established and maintained the procedures required by paragraph (e)(1) of this section; and

(iii) The Recipient and its inventors have complied with the procedures.

(2) If the Grants Officer learns of an unreported Recipient invention that the Grants Officer believes may be a subject inventions, the Recipient may be required to disclose the invention to the agency for a determination of ownership rights.

(3) Any examination of records under this paragraph will be subject to appropriate conditions to protect the confidentiality of the information involved.

(g) *Subcontracts*.

(1) Unless otherwise authorized or directed by the Grants Officer, the Recipient shall --

(i) Include this Clause Patent Rights - Retention by the Recipient - (Large Business) (suitably modified to identify the parties) in any subcontract hereunder (regardless of tier) with other than a small business firm or nonprofit organization for the performance of experimental, developmental, or research work; and

(ii) Include the clause Patent Right - Retention by the Recipient - (Small Business) (suitably modified to identify the parties) in any subcontract hereunder (regardless of tier) with a small business firm or nonprofit organization for the performance of experimental, developmental, or research work.

(2) In the event of a refusal by a prospective subcontractor to accept such a clause the Recipient --

(i) Shall promptly submit a written notice to the Grants Officer setting forth the subcontractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and

(ii) Shall not proceed with such subcontract without the written authorization of the Grants Officer.

(3) The Recipient shall promptly notify the Grants Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Grants Officer, the Recipient shall furnish a copy of such subcontract, and, no more frequently than annually, a listing of the subcontracts that have been awarded.

(4) The subcontractor will retain all rights provided for the Recipient in the clause of paragraph (g)(1)(i) or (1)(ii) of this section, whichever is included in the subcontract, and the Recipient will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(5) Notwithstanding paragraph (g)(4) of this section, and in recognition of the contractor's substantial contribution of funds, facilities and/or equipment to the work performed under this cooperative agreement, the Recipient is authorized, subject to the rights of NASA set forth elsewhere in this clause, to:

(i) Acquire by negotiation and mutual agreement rights to a subcontractor's subject inventions as the Recipient may deem necessary to obtaining and maintaining of such private support; and

(ii) Request, in the event of inability to reach agreement pursuant to paragraph (g)(5)(i) of this section, that NASA invoke exceptional circumstances as necessary pursuant to 37 CFR 401.3(a)(2) if the prospective subcontractor is a small business firm or organization, or for all other organizations, request that such rights for the Recipient be included as an additional reservation in a waiver granted pursuant to 14 CFR part 1245, subpart 1. Any such requests to NASA should be prepared in consideration of the following guidance and submitted to the contract officer.

(A) Exceptional circumstances: A request that NASA make an "exceptional circumstances" determination pursuant to 37 CFR 401.3(a)(2) must state the scope of rights sought by the Recipient pursuant to such determination; identify the proposed subcontractor and the work to be performed under the subcontract; and state the need for the determination.

(B) Waiver petition: The subcontractor should be advised that unless it requests a waiver of title pursuant to the NASA Patent Waiver Regulations (14 CFR part 1245, subpart 1), NASA will acquire title to the subject invention (42 U.S.C. 2457, as amended, Sec. 305). If a waiver is not requested or granted, the Recipient may request a license from NASA (see licensing of NASA inventions, 14 CFR part 1245, subpart 2). A subcontractor requesting a waiver must follow the procedures set forth in the attached clause REQUESTS FOR WAIVER OF RIGHTS - LARGE BUSINESS.

(h) *Preference for United States manufacture*. The Recipient agrees that any products embodying subject inventions or produced through the use of subject inventions shall be manufactured substantially in the United States. However, in individual cases, the requirement to manufacture substantially in the United States may be waived by the Associate Administrator for Procurement (Code HS) with the concurrence of the Associate General Counsel for Intellectual Property upon a showing by the Recipient that under the circumstances domestic manufacture is not commercially feasible.

(i) *March-in rights*. The Recipient agrees that, with respect to any subject invention in which it has acquired title, NASA has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the Recipient, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Subcontractor, assignee, or exclusive licensee refuses such a request NASA has the right to grant such a license itself if the Federal agency determines that-

(1) Such action is necessary because the Recipient or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

(2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Recipient, assignee, or their licensees;

(3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Recipient, assignee, or licensees; or

(4) Such action is necessary because the agreement

required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

§1274.913 Patent Rights - Retention by the Recipient (Small Business).

Patent Rights - Retention by the Recipient (Small Business) (FEB 1996)

(a) *Definitions*.

(1) "*Invention*," as used in this clause, means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the U.S.C.

(2) "*Made*," as used in this clause, when used in relation to any invention means the conception or first actual reduction to practice such invention.

(3) "*Nonprofit organization*," as used in this clause, means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(4) "*Practical application*," as used in this clause, means to manufacture, in the case of a composition of product; to practice, in the case of a process or method, or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

(5) "*Small business firm*," as used in this clause, means a small business concern as defined at Section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.901 through 121.911 will be used.

(6) "*Subject invention*," as used in this clause, means any invention of the Subcontractor conceived or first actually reduced to practice in the performance of work under this Agreement.

(b) *Allocation of principal rights*. The Recipient may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Recipient retains title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) *Invention disclosure, election of title, and filing of patent application by Recipient*.

(1) The Recipient will disclose each subject invention to NASA within two months after the inventor discloses it in writing to Recipient personnel responsible for patent matters. The disclosure to the agency shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Recipient will promptly notify the agency of the acceptance of any manuscript describing the invention for publication or of any sale or public use planned by the Recipient.

(2) The Recipient will elect in writing whether or not to retain title to any such invention by notifying NASA within two years of disclosure to the Federal agency. However, in any case where publication, on sale or public use has initiated the one-year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Recipient will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Recipient will file patent applications in additional countries or international patent offices within either 10 months of the corresponding initial patent application of six months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure election, and filing under paragraphs (c)(1), (2), and (3) of this section may, at the discretion of the agency, be granted.

(d) *Conditions when the Government may obtain title*. The Recipient will convey to NASA, upon written request, title to any subject invention -

(1) If the Recipient fails to disclose or elect title to the subject invention within the times specified in paragraph (c) of this section, or elects not to retain title; provided, that the agency may only request title within 60 days after learning of the failure of the Recipient to disclose or elect within the specified times.

(2) In those countries in which the Recipient fails to file patent applications within the times specified in paragraph (c) of this section; provided, however, that if the Recipient has filed a patent application in a country after the times specified in paragraph (c) of this section, but prior to its receipt of the written request of the Federal agency, the Recipient shall continue to retain title in that country.

(3) In any country in which the Recipient decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

(e) *Minimum rights to Recipient and protection of the Recipient right to file*.

(1) The Recipient will retain a nonexclusive, royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Recipient fails to disclose the invention within the times specified in paragraph (c) of this section. The Recipient's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Recipient is a party and includes the right to grant sublicenses of the same scope to the extent the Recipient was legally obligated to do so at the time the agreement was awarded. The license is transferable only with the approval of NASA, except when transferred to the successor of that part of the Recipient's business to which the invention pertains.

(2) The Contractor's domestic license may be revoked or modified by NASA to the extent necessary to achieve expeditious practical application of subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404 and agency licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Subcontractor has achieved practical application and continues to make the benefits of the invention reasonable accessible to the public. The license in any foreign country may be revoked or modified at the discretion of NASA to the extent the Subcontractor, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, NASA

will furnish the Recipient a written notice of its intention to revoke or modify the license, and the Recipient will be allowed 30 days (or such other time as may be authorized by NASA for good cause shown by the Recipient) after the notice to show cause why the license should not be revoked or modified. The Recipient has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and NASA Reg 14 CFR subpart 1245.2, concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

(f) *Recipient action to protect the Government's interest*.

(1) The Recipient agrees to execute or to have executed and promptly deliver to NASA all instruments necessary to:

(i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Subcontractor elects to retain title, and,

(ii) convey title to the Federal agency when requested under paragraph (d) of this section and to enable the Government to obtain patent protection throughout the world in that subject invention.

(2) The Recipient agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Recipient each subject invention made under contract in order that the Recipient can comply with the disclosure provisions of paragraph (c) of this section, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by paragraph (c)(1) of this section. The Recipient shall instruct such employees, through employee agreements or other suitable educational programs, on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) The Recipient will notify NASA of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

(4) The Recipient agrees to include, within the specification of any United States patent application and any patent issuing thereon covering a subject invention the following statement, "This invention was made with Government support under (identify the agreement) awarded by NASA. The Government has certain rights in the invention."

(5) The Recipient shall provide the Grants Officer the following:

(i) A listing every 12 months (or such longer period as the Grants Officer may specify) from the date of the Agreement, of all subject inventions required to be disclosed during the period.

(ii) A final report prior to closeout of the Agreement listing all subject inventions or certifying that there were none.

(iii) Upon request, the filing date, serial number, and title, a copy of the patent application, and patent number and issue date for any subject invention in any country in which the Recipient has applied for patents.

(iv) An irrevocable power to inspect and make copies of the patent application file, by the Government, when a Federal Government employee is a co-inventor.

(g) *Subcontracts*.

(1) Unless otherwise authorized or directed by the Grants Officer, the Recipient shall --

(i) Include this clause (Patent Rights - Retention by the Recipient (Small Business)), suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental, or research work to be performed by a small business firm or domestic nonprofit organization.

(ii) Include in all other subcontracts, regardless of tier, for experimental, developmental, or research work the patent rights clause (Patent Rights - Retention by the Recipient (Large Business)).

(2) In the event of a refusal by a prospective subcontractor to accept such a clause the Recipient --

(i) Shall promptly submit a written notice to the Grants Officer setting forth the subcontractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and

(ii) Shall not proceed with such subcontract without the written authorization of the Grants Officer.

(3) The Recipient shall promptly notify the Grants Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Grants Officer, the Recipient shall furnish a copy of such subcontract, and, no more frequently than annually, a listing of the subcontracts that have been awarded.

(4) The subcontractor will retain all rights provided for the Recipient in the clause under paragraph (g)(1)(i) or (g)(1)(ii) of this section, whichever is included in the subcontract, and the Recipient will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(5) Notwithstanding paragraph (g)(4) of this section, and in recognition of the contractor's substantial contribution of funds, facilities and/or equipment to the work performed under this cooperative agreement, the Recipient is authorized, subject to the rights of NASA set forth elsewhere in this clause, to:

(i) Acquire by negotiation and mutual agreement rights to a subcontractor's subject inventions as the Recipient may deem necessary to obtaining and maintaining of such private support; and

(ii) Request, in the event of inability to reach agreement pursuant to paragraph (g)(5)(i) of this section that NASA invoke exceptional circumstances as necessary pursuant to 37 CFR 401.3(a)(2) if the prospective subcontractor is a small business firm or organization, or for all other organizations, request that such rights for the Recipient be included as an additional reservation in a waiver granted pursuant to 14 CFR part 1245, subpart 1. Any such requests to NASA should be prepared in consideration of the following guidance and submitted to the contract officer.

(A) Exceptional circumstances: A request that NASA make an "exceptional circumstances" determination pursuant to 37 CFR 401.3(a)(2) must state the scope of rights sought by the Recipient pursuant to such determination; identify the proposed subcontractor and the work to be performed under the subcontract; and state the need for the determination.

(B) Waiver petition: The subcontractor should be advised that unless it requests a waiver of title pursuant to the NASA Patent Waiver Regulations (14 CFR part 1245, subpart 1), NASA will acquire title to the subject invention (42 U.S.C. 2457, as amended, Sec. 305). If a waiver is not requested or granted, the Recipient may request a license from NASA (see licensing of NASA inventions, 14 CFR part 1245, subpart 2). A subcontractor requesting a waiver must follow the procedures set forth in the REQUESTS FOR WAIVER OF RIGHTS - LARGE BUSINESS provision.

(h) *Reporting on utilization of subject inventions*. The Recipient agrees to submit, on request, periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Recipient or its licensees or assignees. Such reports shall

include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Recipient, and such other data and information as the agency may reasonably specify. The Recipient also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceeding under-taken by the agency in accordance with paragraph (i) of this section. As required by 35 U.S.C. 202(c)(5), the agency agrees it will not disclose such information to persons outside the Government without permission of the Recipient.

(i) *Preference for United States manufacture*. The Recipient agrees that any products embodying subject inventions or produced through the use of subject inventions shall be manufactured substantially in the United States. However, in individual cases, the requirement to manufacture substantially in the United States may be waived by the Associate Administrator for Procurement (Code HS) with the concurrence of the Associate General Counsel for Intellectual Property upon a showing by the Recipient that under the circumstances domestic manufacture is not commercially feasible.

(j) *March-in rights*. The Recipient agrees that, with respect to any subject invention in which it has acquired title, NASA has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the Recipient, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Subcontractor, assignee, or exclusive licensee refuses such a request NASA has the right to grant such a license itself if the Federal agency determines that-

(1) Such action is necessary because the Recipient or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

(2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Recipient, assignee, or their licensees;

(3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Recipient, assignee, or licensees; or

(4) Such action is necessary because the agreement required by paragraph (i) of this section has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) *Special provisions for contracts with nonprofit organizations*. If the Recipient is a nonprofit organization, it agrees that -

(1) Rights to a subject invention in the United States may not be assigned without the approval of NASA, except where such assignment is made to an organization which has one of its primary functions the management of inventions; provided, that such assignee will be subject to the same provisions as the Recipient;

(2) The Recipient will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when NASA deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

(3) The balance of any royalties or income earned by the Recipient with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions will be utilized for the support of scientific research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms, and that it will give a preference to a small business firm when licensing a subject invention if the Recipient determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided that the Recipient is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Recipient. However, the Recipient agrees that the Secretary of Commerce may review the Contractor's licensing program and decisions regarding small business applicants, and the Recipient will negotiate changes to its licensing policies, procedures, or practices with the Secretary of Commerce when the Secretary's review discloses that the Recipient could take reasonable steps to more effectively implement the requirements of this paragraph.

(l) A copy of all submissions or requests required by this clause, plus a copy of any reports, manuscripts, publications, or similar material bearing on patent matters, shall be sent to the installation Patent Counsel in addition to any other submission requirements in the cooperative agreement. If any reports contain information describing a "subject invention" for which the Recipient has elected or may elect title, NASA will use reasonable efforts to delay public release by NASA or publication by NASA in a NASA technical series, in order for a patent application to be filed, provided that the Recipient identify the information and the "subject invention" to which it relates at the time of submittal. If required by the Grants Officer, the Recipient shall provide the filing date, serial number and title, a copy of the patent application, and a patent number and issue date for any "subject invention" in any country in which the Recipient has applied for patents.

§1274.914 Requests for Waiver of Rights - Large Business.

Requests For Waiver of Rights - Large Business (FEB 1996)

(a) In accordance with the NASA Patent Waiver Regulations, 14 CFR part 1245, subpart 1, waiver of rights to any or all inventions made or that may be made under a NASA contract or subcontract with other than a small business firm or a domestic nonprofit organization may be requested at different time periods. Advance waiver of rights to any or all inventions that may be made under a contract or subcontract may be requested prior to the execution of the contract or subcontract, or within 30 days after execution by the selected Recipient. In addition, waiver of rights to an identified invention made and reported under a contract or subcontract may be requested, even though a request for an advance waiver was not made or, if made, was not granted.

(b) Each request for waiver of rights shall be by petition to the Administrator and shall include an identification of the petitioner; place of business and address; if petitioner is represented by counsel, the name, address, and telephone number of the counsel; the signature of the petitioner or authorized representative; and the date of signature. No specific forms need be used, but the request should contain a positive statement that waiver of rights is being requested under the NASA Patent Waiver Regulations; a clear indication of whether the request is for an advance waiver or for a waiver of rights for an individual identified invention; whether foreign rights are also requested and, if so, the countries, and a citation of the specific Section or Sections of the regulations under which such rights are requested; and the name, address, and telephone number of the party with whom to communicate when the request is acted upon. Requests for advance waiver of rights should, preferably, be included with the proposal, but in any event in advance of negotiations.

(c) Petitions for advance waiver, prior to contract execution,

must be submitted to the Grants Officer. All other petitions will be submitted to the Patent Representative designated in the contract.

(d) Petitions submitted with proposals selected for negotiation of a contract will be forwarded by the Grants Officer to the installation Patent Counsel for processing and then to the Inventions and Contributions Board. The Board will consider these petitions and where the Board makes the findings to support the waiver, the Board will recommend to the Administrator that waiver be granted, and will notify the petitioner and the Grants Officer of the Administrator's determination. The Grants Officer will be informed by the Board whenever there is insufficient time or information or other reasons to permit a decision to be made without unduly delaying the execution of the contract. In the latter event, the petitioner will be so notified by the Grants Officer. All other petitions will be processed by installation Patent Counsel and forwarded to the Board. The Board shall notify the petitioner of its action and if waiver is granted, the conditions, reservations, and obligations thereof will be included in the Instrument of Waiver. Whenever the Board notifies a petitioner of a recommendation adverse to, or different from, the waiver requested, the petitioner may request reconsideration under procedures set forth in the Regulations.

§1274.915 Restrictions on Sale or Transfer of Technology to Foreign Firms or Institutions.

Restrictions on Sale or Transfer of Technology to Foreign Firms or Institutions (FEB 1996)

(a) The parties agree that access to technology developments under this Agreement by foreign firms or institutions must be carefully controlled. For purposes of this clause, a transfer includes a sale of the company, or sales or licensing of the technology. Transfers do not include:

(1) sales of products or components,

(2) licenses of software or documentation related to sales of products or components, or

(3) transfers to foreign subsidiaries of the Recipient for purposes related to this Agreement.

(b) The Recipient shall provide timely notice to the Grants Officer in writing of any proposed transfer of technology developed under this Agreement. If NASA determines that the transfer may have adverse consequences to the national security interests of the United States, or to the establishment of a robust United States industry, NASA and the Recipient shall jointly endeavor to find alternatives to the proposed transfer which obviate or mitigate potential adverse consequences of the transfer.

§1274.916 Liability and Risk of Loss.

Liability and Risk of Loss (FEB 1996)

(a) With regard to activities undertaken pursuant to this agreement, neither party shall make any claim against the other, employees of the other, the other's related entities (e.g., contractors, subcontractors, etc.), or employees of the other's related entities for any injury to or death of its own employees or employees of its related entities, or for damage to or loss of its own property or that of its related entities, whether such injury, death, damage or loss arises through negligence or otherwise, except in the case of willful misconduct.

(b) To the extent that a risk of damage or loss is not dealt with expressly in this agreement, each party's liability to the other party arising out of this Agreement, whether or not arising as a result of an alleged breach of this Agreement, shall be limited to direct damages only, and shall not include any loss of revenue or profits or other indirect or consequential damages.

§1274.917 Additional Funds.

Additional Funds (FEB 1996)

Pursuant to this agreement, NASA is providing a fixed amount of funding for activities to be undertaken under the terms of this cooperative agreement. NASA is under no obligation to provide additional funds. Under no circumstances shall the Recipient undertake any action which could be construed to imply an increased commitment on the part of NASA under this cooperative agreement.

§1274.918 Incremental Funding.

Incremental Funding (FEB 1996)

(a) Of the award amount indicated on the cover page of this agreement, only the obligated amount indicated on the cover page of this agreement is available for payment. NASA anticipates making additional allotments of funds as required,

(b) These funds will be obligated as appropriated funds become available without any action required of the Recipient. NASA is not obligated to make payments in excess of the total funds obligated.

§1274.919 Cost Principles and Accounting Standards.

Cost Principles and Accounting Standards (FEB 1996)

The expenditure of Government funds by the Recipient and the allowability of costs recognized as a resource contribution by the Recipient (See clause entitled "Resource Sharing Requirements") shall be governed by the FAR cost principles, 48 CFR part 31. (If the Recipient is a consortium which includes non-commercial firm members, cost allowability for those members will be determined as follows: Allowability of costs incurred by State, local or federally-recognized Indian tribal governments is determined in accordance with the provisions of OMB Circular A-87, "Cost Principles for State and Local Governments." The allowability of costs incurred by non-profit organizations is determined in accordance with the provisions of OMB Circular A-122, "Cost Principles for Non-Profit Organizations." The allowability of costs incurred by institutions of higher education is determined in accordance with the provisions of OMB Circular A-21, "Cost Principles for Educational Institutions." The allowability of costs incurred by hospitals is determined in accordance with the provisions of Appendix E of 45 CFR part 74, "Principles for Determining Costs Applicable to Research and Development Under Grants and Contracts with Hospitals.") Recipient's method for accounting for the expenditure of funds must be consistent with Generally Accepted Accounting Principles.

§1274.920 Responsibilities of the NASA Technical Officer.

Responsibilities of the NASA Technical Office (FEB 1996)

(a) The NASA Grant Administrator and Technical Officer for this cooperative agreement are identified on the cooperative agreement cover sheet.

(b) The Grant Specialist shall serve as NASA's authorized representative for the administrative elements of all work to be performed under the agreement.

(c) The Technical Officer shall have the authority to issue written Technical Advice which suggests redirecting the project work (e.g., by changing the emphasis among different tasks), or pursuing specific lines of inquiry likely to assist in accomplishing the effort. The Technical Officer shall have the authority to approve or disapprove those technical reports, plans, and other technical information the Recipient is required to submit to NASA for approval. The Technical Officer is not authorized to issue and the Recipient shall not follow any Technical Advice which constitutes work which is not contemplated under this agreement; which in any manner causes an increase or decrease in the resource sharing or in the time required for performance of the project; which has the effect of changing any of the terms or conditions of the cooperative agreement; or which interferes with the Recipient's right to perform the project in accordance with the terms and conditions of this cooperative agreement.

§1274.921 Publications and Reports: Non-Proprietary Research Results.

Publications and Reports: Non-Proprietary Research Results (FEB 1996)

(a) NASA encourages the widest practicable dissemination of research results at all times during the course of the investigation consistent with the other terms of this agreement.

(b) All information disseminated as a result of the cooperative agreement, shall contain a statement which acknowledges NASA's support and identifies the cooperative agreement by number.

(c) Prior approval by the NASA Technical Officer is required only where the Recipient requests that the results of the research be published in a NASA scientific or technical publication. Two copies of each draft publication shall accompany the approval request.

(d) Reports shall contain full bibliographic references, abstracts of publications and lists of all other media in which the research was discussed. The Recipient shall submit the following technical reports:

(1) A performance report for every year of the cooperative agreement (except the final year). Each report is due 60 days before the anniversary date of the cooperative agreement and shall describe research accomplished during the report period.

(2) A summary of research, which is due by 90 days after the expiration date of the cooperative agreement, regardless of whether or not support is continued under another cooperative agreement. This report is intended to summarize the entire research accomplished during the duration of the cooperative agreement.

(e) Performance reports and summaries of research shall display the following on the first page:

(1) Title of the cooperative agreement.
(2) Type of report.
(3) Period covered by the report.
(4) Name and address of the Recipient's organization.
(5) Cooperative agreement number.

(f) An original and two copies, one of which shall be of suitable quality to permit micro-reproduction, shall be sent as follows:

(1) Original--Grant Officer.
(2) Copy--Technical Officer
(3) Micro-reproducible copy--NASA Center for Aerospace Information (CASI), Attn: Accessioning Department, 800 Elkridge Landing Road, Linthicum Heights, Maryland 21090-2934.

§1274.922 Suspension or Termination.

Suspension or Termination (FEB 1996)

(a) This cooperative agreement may be suspended or terminated in whole or in part by the Recipient or by NASA after consultation with the other party. NASA may terminate the agreement, for example, if the Recipient is not making anticipated technical progress, if the Recipient materially fails to comply with the terms of the agreement, if the Recipient materially changes the objective of the agreement, or if appropriated funds are not available to support the program.

(b) Upon fifteen (15) days written notice to the other party, either party may temporarily suspend the cooperative agreement, pending corrective action or a decision to terminate the cooperative agreement. The notice should express the reasons why the agreement is being suspended.

(c) In the event of termination by either party, the Recipient shall not be entitled to additional funds or payments except as may be required by the Recipient to meet NASA's share of commitments which had in the judgment of NASA become firm prior to the effective date of termination and are otherwise appropriate. In no event, shall these additional funds or payments exceed the amount of the next payable milestone billing amount.

§1274.923 Equipment and Other Property.

Equipment and Other Property (FEB 1996)

(a) NASA cooperative agreements permit acquisition of technical property required for the conduct of research. Acquisition of property costing in excess of $5,000 and not included in the approved proposal budget requires the prior approval of the Grant Officer unless the item is merely a different model of an item shown in the approved proposal budget.

(b) Recipients may not purchase, as a direct cost to the cooperative agreement, items of non-technical property, examples of which include but are not limited to office equipment and furnishings, air conditioning equipment, reproduction and printing equipment, motor vehicles, and automatic data processing equipment. If the Recipient requests an exception, the Recipient shall submit a written request for Grant Officer approval, prior to purchase by the Recipient, stating why the Recipient cannot charge the property to indirect costs.

(c) Under no circumstances shall cooperative agreement funds be used to acquire land or any interest therein, to acquire or construct facilities (as defined in 48 CFR (FAR) 45.301), or to procure passenger carrying vehicles.

(d) The government shall have title to equipment and other personal property acquired with government funds. Such property shall be disposed of pursuant to 48 CFR (FAR) 45.603. The Recipient shall have title to equipment and other personal property acquired with Recipient funds. Such property shall remain with the Recipient at the conclusion of the cooperative agreement.

(e) Title to Government furnished equipment (including equipment, title to which has been transferred to the Government pursuant to 14 CFR 1260.408(d) prior to completion of the work) will remain with the Government.

(f) The Recipient shall establish and maintain property management standards for nonexpendable personal property and otherwise manage such property as set forth in 14 CFR 1260.507.

(g) Annually by October 31, the Recipient shall submit 2 copies of an inventory report which lists all Government furnished equipment and equipment acquired with Government funds in their custody as of September 30. The Recipient shall submit 2 copies of a final inventory report by 60 days after the expiration date of the cooperative agreement. The final inventory report shall contain a list of all Recipient acquired equipment and a list of Government furnished equipment. Annual and final inventory reports shall reflect the elements required in 14 CFR 1260.507(a)(1)(i), (ii), (iii), (v) through (viii) and beginning and ending dollar value totals for the reporting period and be submitted to the grant officer. When Government furnished equipment is no longer needed, the Recipient shall notify the Grants Officer, who will provide disposition instructions.

§1274.924 Civil Rights.

Civil Rights (FEB 1996)

Work on NASA cooperative agreements is subject to the provisions of Title VI of the Civil Rights Act of 1964 (Public Law 88-352; 42 U.S.C. 2000d-l), Title IX of the Education Amendments of 1972 (20 U.S.C. 1680 et seq.), section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.), and the NASA implementing regulations (14 CFR parts 1250, 1251, and 1252).

§1274.925 Subcontracts.

Subcontracts (FEB 1996)

(a) Recipients are not authorized to issue grants or cooperative agreements.

(b) NASA Grant Officer consent is required for subcontracts over $100,000, if not accepted by NASA in the original proposal. The Recipient shall provide the following

information to the Grant Officer:

(1) A copy of the proposed subcontract.

(2) Basis for subcontractor selection.

(3) Justification for lack of competition when competitive bids or offers are not obtained.

(4) Basis for award cost or award price.

(c) The Recipient shall utilize small business concerns, small disadvantaged business concerns, Historically Black Colleges and Universities, minority educational institutions, and women-owned small business concerns as subcontractors to the maximum extent practicable.

§1274.926 Clean Air-Water Pollution Control Acts.

Clean Air-Water Pollution Control Acts (FEB 1996)

If this cooperative agreement or supplement thereto is in excess of $100,000, the Recipient agrees to notify the Grant Officer promptly of the receipt, whether prior or subsequent to the Recipient's acceptance of this cooperative agreement, of any communication from the Director, Office of Federal Activities, Environmental Protection Agency (EPA), indicating that a facility to be utilized under or in the performance of this cooperative agreement or any subcontract thereunder is under consideration to be listed on the EPA "List of Violating Facilities" published pursuant to 40 CFR 15.20. By acceptance of a cooperative agreement in excess of $100,000, the Recipient:

(a) Stipulates that any facility to be utilized thereunder is not listed on the EPA "List of Violating Facilities" as of the date of acceptance;

(b) agrees to comply with all requirements of section 114 of the Clean Air Act, as amended (42 U.S.C. 1857 et seq. as amended by Public Law 91-604) and section 308 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq. as amended by Public Law 92-500) relating to inspection, monitoring, entry, reports and information, and all other requirements specified in the aforementioned sections, as well as all regulations and guidelines issued thereunder after award of and applicable to the cooperative agreement; and

(c) agrees to include the criteria and requirements of this clause in every subcontract hereunder in excess of $100,000, and to take such action as the Grant Officer may direct to enforce such criteria and requirements.

§1274.927 Debarment and Suspension and Drug-Free Workplace.

Debarment and Suspension and Drug-Free Workplace (FEB 1996)

NASA cooperative agreements are subject to the provisions of 14 CFR part 1265, Government-wide Debarment and Suspension (Nonprocurement) and Government-wide requirements for Drug-Free Workplace, unless excepted by 14 CFR 1265.110 or 1265.610.

§1274.928 Foreign National Employee Investigative Requirements.

Foreign National Employee Investigative Requirements (FEB 1996)

(a) The Recipient shall submit a properly executed Name Check Request (NASA Form 531) and a completed applicant fingerprint card (Federal Bureau of Investigation Card FD-258) for each foreign national employee requiring access to a NASA Installation. These documents shall be submitted to the Installation's Security Office at least 75 days prior to the estimated duty date. The NASA Installation Security Office will request a National Agency Check (NAC) for foreign national employees requiring access to NASA facilities. The NASA Form 531 and fingerprint card may be obtained from the NASA Installation Security Office.

(b) The Installation Security Office will request from NASA Headquarters, International Relations Division (Code IR), approval for each foreign national's access to the Installation prior to providing access to the Installation. If the access approval is obtained from NASA Headquarters prior to completion of the NAC and performance of the cooperative agreement requires a foreign national to be given access immediately, the Technical Officer may submit an escort request to the Installation's Chief of Security.

§1274.929 Restrictions on Lobbying.

Restrictions on Lobbying (FEB 1996)

This award is subject to the provisions of 14 CFR part 1271 "New Restrictions on Lobbying."

§1274.930 Travel and Transportation.

Travel and Transportation (FEB 1996)

(a) For travel funded by the government under this agreement, section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118)(Fly America Act) requires the Recipient to use U.S.-flag air carriers for international air transportation of personnel and property to the extent that service by those carriers is available.

(b) Department of Transportation regulations, 49 CFR part 173, govern Recipient shipment of hazardous materials and other items.

§1274.931 Electronic Funds Transfer Payment Methods.

Electronic Funds Transfer Payment Methods (FEB 1996)

Payments under this cooperative agreement will be made by the Government either by check or electronic funds transfer (through the Treasury Fedline Payment System (FEDLINE) or the Automated Clearing House (ACH)), at the option of the Government. After award, but no later than 14 days before an invoice is submitted, the Recipient shall designate a financial institution for receipt of electronic funds transfer payments, and shall submit this designation to the Grant Officer or other Government official, as directed.

(a) For payment through FEDLINE, the Recipient shall provide the following information:

(1) Name, address, and telegraphic abbreviation of the financial institution receiving payment.

(2) The American Bankers Association 9-digit identifying number for wire transfers of the financing institution receiving payment if the institution has access to the Federal Reserve Communication System.

(3) Payee's account number at the financial institution where funds are to be transferred.

(4) If the financial institution does not have access to the Federal Reserve Communications System, name, address, and telegraphic abbreviation of the correspondent financial institution through which the financial institution receiving payment obtains wire transfer activity. Provide the telegraphic abbreviation and American Bankers Association identifying number for the correspondent institution.

(b) For payment through ACH, the Recipient shall provide the following information:

(1) Routing transit number of the financial institution receiving payment (same as American Bankers Association identifying number used for FEDLINE).

(2) Number of account to which funds are to be deposited.

(3) Type of depositor account ("C" for checking, "S" for savings).

(4) If the Recipient is a new enrollee to the ACH system, a "Payment Information Form," SF 3881, must be completed before payment can be processed.

(c) In the event the Recipient, during the performance of this cooperative agreement, elects to designate a different financial institution for the receipt of any payment made using electronic

funds transfer procedures, notification of such change and the required information specified above must be received by the appropriate Government official 30 days prior to the date such change is to become effective.

(d) The documents furnishing the information required in this clause must be dated and contain the signature, title, and telephone number of the Recipient official authorized to provide it, as well as the Recipient's name and contract number.

(e) Failure to properly designate a financial institution or to provide appropriate payee bank account information may delay payments of amounts otherwise properly due.

§1274.932 Retention and Examination of Records.

Retention and Examination of Records (FEB 1996)

Financial records, supporting documents, statistical records, and all other records (or microfilm copies) pertinent to this cooperative agreement shall be retained for a period of 3 years, except that records for nonexpendable property acquired with cooperative agreement funds shall be retained for 3 years after its final disposition and, if any litigation, claim, or audit is started before the expiration of the 3-year period, the records shall be retained until all litigation, claims, or audit findings involving the records have been resolved. The retention period starts from the date of the submission of the final invoice. The Administrator of NASA and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any pertinent books, documents, papers, and records of the Recipient and of subcontractors to make audits, examinations, excerpts, and transcripts. All provisions of this clause shall apply to any subcontractor performing substantive work under this cooperative agreement.

Appendix A to Part 1274--Contract Provisions

All contracts awarded by a Recipient, including small purchases, shall contain the following provisions if applicable:

1. Equal Employment Opportunity--All contracts shall contain a provision requiring compliance with E.O. 11246, "Equal Employment Opportunity," as amended by E.O. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

2. Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 276c)--All contracts in excess of $50,000 for construction or repair awarded by Recipients and Subrecipients shall include a provision for compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874), as supplemented by Department of Labor regulations (29 CFR part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each Recipient or subRecipient shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he is otherwise entitled. The Recipient shall report all suspected or reported violations to NASA.

3. Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333)--Where applicable, all contracts awarded by Recipients in excess of $2,000 for construction contracts and in excess of $50,000 for other contracts, other than contracts for commercial items, that involve the employment of mechanics or laborers shall include a provision for compliance with sections 102 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333), as supplemented by Department of Labor regulations (29 CFR part 5). Under Subsection 102 of the Act, each Recipient shall be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than 1½ times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

4. Rights to Inventions Made Under a Contract or Agreement--Contracts or agreements for the performance of experimental, developmental, or research work shall provide for the rights of the Federal Government and the Recipient in any resulting invention in accordance with 37 CFR part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

5. Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), as amended--Contracts, other than contracts for commercial items, of amounts in excess of $100,000 shall contain a provision that requires the Recipient to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq.). Violations shall be reported to NASA and the Regional Office of the Environmental Protection Agency (EPA).

6. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)--Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the Recipient.

7. Debarment and Suspension (E.O's 12549 and 12689)--No contract shall be made to parties listed on the General Services Administration's List of Parties Excluded from Federal Procurement or Nonprocurement Programs in accordance with E.O.s 12549 and 12689, "Debarment and Suspension." This list contains the names of parties debarred, suspended, or otherwise excluded by agencies, and contractors declared ineligible under statutory or regulatory authority other than E.O. 12549. Contractors with awards that exceed the small purchase threshold shall provide the required certification regarding its exclusion status and that of its principal employees.

Appendix B to Part 1274--Reports

1. Individual procurement action report (NASA Form 507).

The grant officer is responsible for submitting NASA Form 507 for all cooperative agreement actions.

2. Inventory listings of equipment.

As provided in paragraph (g) of §1274.923, an annual inventory listing of Government furnished equipment will be submitted by October 31 of each year. Upon receipt of each annual inventory listing, the administrative grant officer will provide 1 copy to the NASA installation financial management officer and 1 copy to the NASA installation industrial property

officer. A final inventory report of Government furnished equipment and grantee acquired equipment is due 60 days after the end of the cooperative agreement, in accordance with subpart I. Upon receipt of the final inventory report, the administrative grant officer will provide 1 copy to the technical officer and 1 copy to the NASA Installation industrial property officer.

3. Disclosure of lobbying activities (SFLLL).

(a) Grant officers shall provide one copy of each SF LLL furnished under 14 CFR 1271.110 to the Procurement Officer for transmittal to the Director, Analysis Division (Code HC).

(b) Suspected violations of the statutory prohibitions implemented by 14 CFR part 1271 shall be reported to the Director, Contract Management Division (Code HK).

Appendix C to Part 1274--Listing of Exhibits

Exhibit A--Format for cooperative agreement

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
COOPERATIVE AGREEMENT

1. TO:
2. COOPERATIVE AGREEMENT NO.:
3. SUPPLEMENT NO.:
4. EFFECTIVE DATE:
5. EXPIRATION DATE:

6. FOR RESEARCH ENTITLED:

7. AWARD HISTORY
   PREVIOUS AMOUNT:
   THIS ACTION:
   TOTAL TO DATE:

   FUNDING HISTORY
   PREVIOUS OBLIGATION:
   THIS ACTION:
   TOTAL TO DATE:

8. NASA PROCUREMENT REQUEST NO.:
   PPC CODE.: APPROPRIATION:

9. POINTS OF CONTACT:

   TECHNICAL OFFICER: GRANT ADMINISTRATOR:

   PAYMENT:

10. This cooperative agreement is awarded under the authority of 42 U.S.C. 2473(c)(5), and is subject to all applicable laws and regulations of the United States in effect on the date this cooperative agreement is awarded, including but not limited to 14 CFR Part 1274 (Cooperative Agreements with Commercial Firms).

UNITED STATES OF AMERICA	Recipient
_____	_____
XXXX XXXXXXXXXX GRANTS OFFICER	XXXXX XXXXXXXXXXX AUTHORIZED REPRESENTATIVE
DATE: _____	DATE: _____
	Enclosures (As Required)

[End of Policy]

OMB Circular A-110 Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations

Subpart C, Post-Award Requirements

_____.23 Cost sharing or matching.

(a) All contributions, including cash and third party in- kind, shall be accepted as part of the recipient's cost sharing or matching when such contributions meet all of the following criteria.

(1) Are verifiable from the recipient's records.

(2) Are not included as contributions for any other federally-assisted project or program.

(3) Are necessary and reasonable for proper and efficient accomplishment of project or program objectives.

(4) Are allowable under the applicable cost principles.

(5) Are not paid by the Federal Government under another award, except where authorized by Federal statute to be used for cost sharing or matching.

(6) Are provided for in the approved budget when required by the Federal awarding agency.

(7) Conform to other provisions of this Circular, as applicable.

(b) Unrecovered indirect costs may be included as part of cost sharing or matching only with the prior approval of the Federal awarding agency.

(c) Values for recipient contributions of services and property shall be established in accordance with the applicable cost principles. If a Federal awarding agency authorizes recipients to donate buildings or land for construction/facilities acquisition projects or long-term use, the value of the donated property for cost sharing or matching shall be the lesser of (1) or (2).

(1) The certified value of the remaining life of the properly recorded in the recipient's accounting records at the time of donation.

(2) The current fair market value. However, when there is sufficient justification, the Federal awarding agency may approve the use of the current fair market value of the donated property, even if it exceeds the certified value at the time of donation to the project.

(d) Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for volunteer services shall be consistent with those paid for similar work in the recipient's organization. In those instances in which the required skills are not found in the recipient organization, rates shall be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable my be included in the valuation.

(e) When an employer other than the recipient furnishes the services of an employee, these services shall be valued at the employee's regular rate of pay (plus an amount of fringe benefits that are reasonable, allowable, and allocable, but exclusive of overhead costs), provided these services are in the same skill for which the employee is normally paid.

(f) Donated supplies may include such items as expendable equipment, office supplies, laboratory supplies or workshop and classroom supplies. Value assessed to donated supplies included in the cost sharing or matching share shall be reasonable and shall not exceed the fair market value of the properly at the time of the donation.

(g) The method used for determining cost sharing or matching for donated equipment, buildings and land for which title passes to the recipient may differ according to the purpose of the award, if (1) or (2) apply.

(1) If the purpose of the award is to assist the recipient in the acquisition of equipment, buildings or land, the total value of the donated property may be claimed as cost sharing or matching.

(2) If the purpose of the award is to support activities that require the use of equipment, buildings or land, normally only depreciation or use charges for equipment and buildings may be made. However, the full value of equipment or other capital assets and fair rental charges for land may be allowed, provided that the Federal awarding agency has approved the charges.

(h) The value of donated property shell be determined in accordance with the usual accounting policies of the recipient, with
the following qualifications.

(1) The value of donated land end buildings shall not exceed its fair market value at the time of donation to the recipient as established by an independent appraiser (e.g., certified real property appraiser or General Services Administration representative) and certified by a responsible official of the recipient.

(2) The value of donated equipment shall not exceed the fair market value of equipment of the same age and condition at the time of donation.

(3) The valued donated space shall not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.

(4) The value of loaned equipment shall, not exceed its fair rental value.

(5) The following requirements pertain to the recipient's supporting records for in-kind contributions from third parties.

(i) Volunteer services shall be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.

(ii) The basis for determining the valuation for personal service, material, equipment, buildings and land shall be documented.

APPENDIX V - MANAGEMENT COMMENTS

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001

AUG 15 1997

Reply to Attn of: HK

TO: W/Assistant Inspector General for Partnerships and Alliances

FROM: H/Deputy Associate Administrator for Procurement

SUBJECT: Revised Draft Report on Review of NASA Cooperative Agreements With Large Commercial Firms, P&A-97-001

Enclosed is our response to the subject report dated July 28, 1997. The responses to Recommendations 5 and 6, which were addressed to Code R, have been provided by the Associate Administrator for Aeronautics and Space Transportation Technology.

Please call Tom Deback at 358-0431 or Jack Horvath at 358-0456 if you have any questions or need further assistance on this matter.

Tom Luedtke

Enclosure

HEADQUARTERS OFFICE OF PROCUREMENT

RESPONSE TO

OFFICE OF INSPECTOR GENERAL (OIG)

DRAFT REPORT NO. P&A-97-001

DATED JULY 28, 1997

REVIEW OF NASA COOPERATIVE AGREEMENTS

WITH LARGE COMMERCIAL FIRMS

DATE: August 12, 1997

ENCLOSURE

OIG RECOMMENDATION 1:

To ensure resource sharing contributions are validated and valued, we recommend that the Associate Administrator for Procurement reassess NASA resource sharing policies, to include as a minimum, the following:

Redefine the definition of resource sharing which supports the Office of the Chief Financial Officer's full cost initiatives;

Provide guidance on identifying and valuing its total resource sharing contributions—noncash and cash; and

Provide guidance on verifying recipient's proposed and actual contributions.

CODE H RESPONSE TO RECOMMENDATION 1: CONCUR

Code H will reassess the cooperative agreement resource sharing policies, with Code B and other support as deemed appropriate, and issue guidance and/or a formal change to the Grant and Cooperative Agreement Handbook.

CORRECTIVE ACTION OFFICIAL:	CODE HK/T. DEBACK
CORRECTIVE ACTION CLOSURE OFFICIAL	CODE HK/L. LAYTON
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	FEBRUARY 1, 1998

OIG RECOMMENDATION 2:

Identify required provisions for each agreement and give CO's discretion to decide what provisions, e.g., patent rights, publications and reports, and equipment and other property, are optional. Consider attaching to the agreement a list of reporting requirements.

CODE H RESPONSE TO RECOMMENDATION 2: NONCONCUR

The provisions for cooperative agreements with commercial firms in the Grant and Cooperative Agreement Handbook are considered appropriate and the minimum necessary to adequately protect the rights of NASA and the recipient based on the nature and purpose of cooperative agreements with commercial firms. In those cases in which a provision may be inappropriate, a deviation should be sought. With respect to attaching a listing of reporting requirements, see our response to Recommendation 3.

OIG RECOMMENDATION 3:

Ensure compliance with cooperative agreement reporting requirements.

CODE H RESPONSE TO RECOMMENDATION 3: PARTIALLY CONCUR

Code H will assess with Code AO the advisability of a provision or other mechanism to highlight all cooperative agreement reporting requirements. This should assist both NASA and recipient personnel in better identifying and complying with reporting requirements.

CORRECTIVE ACTION OFFICIAL:	CODE HK/T. DEBACK
CORRECTIVE ACTION CLOSURE OFFICIAL	CODE HK/L. LAYTON
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	FEBRUARY 1, 1998

OIG RECOMMENDATION 4:

Ensure CO's and COTR's understand what their responsibilities are per the Handbook. For example CO's need to understand why it is important that a copy of a basic cooperative agreement be sent to CASI and why a recipient should send research reports there.

CODE H RESPONSE TO RECOMMENDATION 4: PARTIALLY CONCUR

It is an unrealistic objective to ensure that CO's and COTR's understand their responsibilities. We can provide draft copies of regulations to the centers for comment to help ensure understanding, we can conduct training sessions, we can be available to help resolve misunderstandings, and we can do spot checks as in the case of IG and Procurement Management Reviews. All of these things have been done in the case of cooperative agreements with commercial firms. However, we cannot ensure that personnel will in all cases read, understand, and adhere to published policy.

With respect to CASI reporting requirements, we will highlight CASI's role and the importance of sending required documentation to them through an article in the Procurement Countdown.

CORRECTIVE ACTION OFFICIAL:	CODE HK/T. DEBACK
CORRECTIVE ACTION CLOSURE OFFICIAL	CODE HK/L. LAYTON
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	OCTOBER 1, 1997

OIG RECOMMENDATION 5:

Assess the minimal reporting of new technologies by large businesses having cooperative agreements with NASA; and

CODE R RESPONSE TO RECOMMENDATION 5: Concur.

The Commercial Technology Division, Office of Aeronautics and Space Technology, provides an annual commercial technology inventory report to the Deputy Administrator. This report includes an assessment of large businesses' performance of new technology reports from contracts. The Commercial Technology Division will include an assessment of large business performance in reporting new technologies under cooperative agreements in future inventory reports.

OIG RECOMMENDATION 6:

In coordination with the Associate Administrator for Procurement, implement the necessary corrective actions to improve new technology reporting to enhance the commercial technology mission.

CODE R RESPONSE TO RECOMMENDATION 6: Partially Nonconcur.

OASTT views this recommendation to be redundant with the set of recommendations included in the Inspector General's previous report P&A-96-001, Review of NASA New Technology Reporting. The NASA Commercial Technology Management Team, in coordination with the Office of Procurement and the Office of General Counsel, are presently in the final stages of reporting back to NASA management a reengineered new technology reporting process and program. This new process covers all new technology reporting requirements contained in contracts, grants, and cooperative agreements; as well as invention disclosures required of civil servants. The implementation of the recommendations to report P&A-96-001 will meet the intent of this recommendation, and as such, no further action will be necessary.

OIG RECOMMENDATION 7:

The Associate Administrator for Procurement should evaluate the provisions included in the AITP, which differ from current policies, to determine their applicability to all NASA cooperative agreements.

CODE H RESPONSE TO RECOMMENDATION 7: CONCUR

Code H will review the AITP provisions and determine their applicability to other NASA cooperative agreements.

CORRECTIVE ACTION OFFICIAL:	CODE HK/T. DEBACK
CORRECTIVE ACTION CLOSURE OFFICIAL	CODE HK/L. LAYTON
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	OCTOBER 1, 1997

OIG RECOMMENDATION 8:

Ensure accurate data is in FACS. Correct errors found for completion dates, estimated costs, and size of business.

CODE H RESPONSE TO RECOMMENDATION 8: CONCUR

Code H will work with the centers to ensure that errors in FACS are corrected.

CORRECTIVE ACTION OFFICIAL:	CODE HS/P. KATES
CORRECTIVE ACTION CLOSURE OFFICIAL	CODE HK/L. LAYTON
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	OCTOBER 1, 1997

OIG RECOMMENDATION 9:
Revise instructions for completing item 66 (estimated cost or fixed price) on NASA Form 507B. Clearly specify what the estimated cost should be for cooperative agreements with commercial firms.

CODE H RESPONSE TO RECOMMENDATION 9: CONCUR

Code H will revise the instructions for completing items 66 on NASA Form 507B.

CORRECTIVE ACTION OFFICIAL:	CODE HS/P. KATES
CORRECTIVE ACTION CLOSURE OFFICIAL	CODE HK/L. LAYTON
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	OCTOBER 1, 1997

OIG RECOMMENDATION 10:

Revise guidelines to include requirements that are applicable to long duration or large dollar value award agreements.

CODE H RESPONSE TO RECOMMENDATION 10: NONCONCUR

As the report states, the significant majority of cooperative agreements awarded to date are relatively low dollar value agreements. 87% of the active agreements involve NASA contributions of $10M or less and 93% involve NASA contributions of $20M or less. Only two agreements would meet the definition of a major system. As in the case of major systems contracts, deviations from established policy are required to deal with the vagaries of major system requirements.

Code H feels that the policies in the current Grant and Cooperative Agreement Handbook address the vast majority of cooperative agreements and that whatever policies are established would need to be tailored for unusually large agreements.

OIG RECOMMENDATION 11:

Require use of formal COTR delegation letters as a means to ensure that COTR's understand what they must do.

CODE H RESPONSE TO RECOMMENDATION 11: CONCUR

Code H will develop a draft COTR delegation letter and require it be used for cooperative agreements with commercial firms.

CORRECTIVE ACTION OFFICIAL:	CODE HK/T. DEBACK
CORRECTIVE ACTION CLOSURE OFFICIAL	CODE HK/L. LAYTON
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	FEBRUARY 1, 1998

OIG RECOMMENDATION 12:

Revise Handbook §1274.920 to include the requirement that the NASA technical officer verify completion of each milestone to the CO prior to payment.

CODE H RESPONSE TO RECOMMENDATION 12: NONCONCUR

The requirement for Technical Officer verification of completion of each milestone is contained in §1274.202(c)(4). Since this is an internal NASA matter, it need not be spelled out in the cooperative agreement itself.

OIG RECOMMENDATION 13: Ensure the procurement management survey process addresses Center adherence to cooperative agreement policies and procedures.

CODE H RESPONSE TO RECOMMENDATION 13: CONCUR

Code H will ensure that the Procurement Management Review Team is made aware of the importance of reviewing cooperative agreements with commercial firms and the key issues which should be scrutinized.

CORRECTIVE ACTION OFFICIAL:	CODE HK/T. DEBACK
CORRECTIVE ACTION CLOSURE OFFICIAL	CODE HK/L. LAYTON
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	OCTOBER 1, 1997

APPENDIX VI - QUESTIONNAIRE SENT TO RECIPIENTS

National Aeronautics and
Space Administration

Office of Inspector General
Code W
Washington, DC 20546-0001

Reply to Attn of: W

[date]

[insert recipient name and address]

Subject: NASA Office of Inspector General Review of Cooperative Agreements With Commercial Firms, Assignment No. P&A-97-001

Ref: Cooperative Agreements No. [insert agreement number and title]

In recent years, NASA has used cooperative agreements (CA's) to work with commercial firms as a means to:

- support research and development,
- transfer technology to the commercial sector, or
- develop capability to enhance competitiveness.

In June 1995, NASA listed in the Federal Register proposed rules pertaining to CA's with commercial firms. NASA gave as background the following: *As a result of the National Performance Review, participation in ARPA's Technology Reinvestment Program, the High Performance Computing Initiative, and a strong sense within NASA that cooperative agreements with industry are an appropriate way to carry out certain assistance type activities, use of cooperative agreements is being increased. As part of this increase, cooperative agreements with industry are being utilized for the first time.* (Federal Register, June 27, 1995, Vol. 60, No. 123).

The NASA Office of Inspector General (OIG) has initiated a review of CA's with commercial firms to assess NASA's experience with CA's and to identify opportunities that would improve the administrative processes being used. Given the cooperative and participative objectives of using CA's, it is important that the recipient's views are obtained and recognized as part of our planned review.

In support of the OIG review, please answer the following questions and provide comments on your firm's experience with NASA's CA process.

- Do you consider the CA a success in that the expected result/benefit was achieved?

If the actual result/benefit deviated from planned, describe the deviation.

- Would your firm participate in future CA's should the opportunity be available?
- Do you consider the collaboration between NASA and your firm adequate on the CA?

  Could the collaboration be improved? Please explain.
- Did any technological advances or commercialization opportunities result from the CA?

  Has there been new technology reporting for this CA? Please identify.
- What advantages were noted because of performing this effort through a CA rather than a contract?
- What disadvantages were encountered because of performing this effort through a CA rather than a contract?
- Does your firm have any comments on how the CA process can be improved?

[insert questions specific to the cooperative agreement listed in the subject line]

Please send the completed questionnaire and comments by [date], to:

Assistant Inspector General for Partnerships and Alliances
Office of Inspector General, Code W
National Aeronautics and Space Administration
Washington, DC 20546

Should you have any questions regarding this request, please call [name and telephone number].

Thank you for your cooperation and participation.

Lewis D. Rinker
Assistant Inspector General for Partnerships
and Alliances

cc:

APPENDIX VI - QUESTIONNAIRE SENT TO RECIPIENTS

RECIPIENT COMMERCIALIZATION OPPORTUNITIES

Examples of commercialization opportunities that were reported from the questionnaire include:

- NASA's Interface Technology, originally developed using H-elements to P-elements, was extended. P-elements enhanced this technology by increasing the efficiency to perform detailed stress analysis by reducing modeling time and improving modeling accuracy.

- Technological advances were made in both face gear grinding and in split torque transmission configuration.

- Improvements in superplastic forming provided additional information toward further application of this technology.

- A recipient's subcontractor developed an algorithm that provides an alternate approach for a redundant Course Sun Sensor (CSS) function for 4π steradian coverage using only 6 CSS eyes, versus the standard approach that use 16 eyes to provide the equivalent functions. This new approach uses only one-third the number of detectors.

- The cooperative agreement produced software improvements incorporated into the commercial product LSF 3.0, and made available to the public.

- Because of the technology developed under the cooperative agreement, the recipient is applying for several patents concerning Passive Millimeter Wave Camera technology.

- Results provided for applications of castings to be 60 percent less expensive than before, and reduce lead time from 12 months to 4 months.

- The results produced improved thermal protection system, new cryoinsulation, composite field lines, composite LH_2 tank, cryofluid handling software and a new welding process.

- Recipient subcontractors have made prototypes of: (1) a new videomatic head tracking system for augmented reality applications, and (2) an acoustic/inertial hybrid head tracking system. Both firms intend to commercialize the technologies.

APPENDIX VII - MAJOR CONTRIBUTORS TO THIS REPORT

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Chairman and Ranking Minority Member - Congressional Committees and Subcommittees

Senate Committee on Appropriations
Senate Subcommittee on VA-HUD-Independent Agencies
Senate Committee on Commerce, Science and Transportation
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Partnerships and Alliances

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Office of Inspector General
NASA Headquarters
Code W
Washington, DC 20546

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